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Inscriber® TitleOne™

Inscriber® TitleOne™ User Guide

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Chapter 1

Introducing TitleOne

Get started in TitleOne.

TitleOne Overview

Inscriber® TitleOne™ 5.0 is a powerful software program that consists of a suite of broadcast quality graphic and output tools. Use TitleOne to create, animate, manage, and output your on-screen layouts. The flexibility of TitleOne allows you to use the software tools in a way that fits your specific work environment.

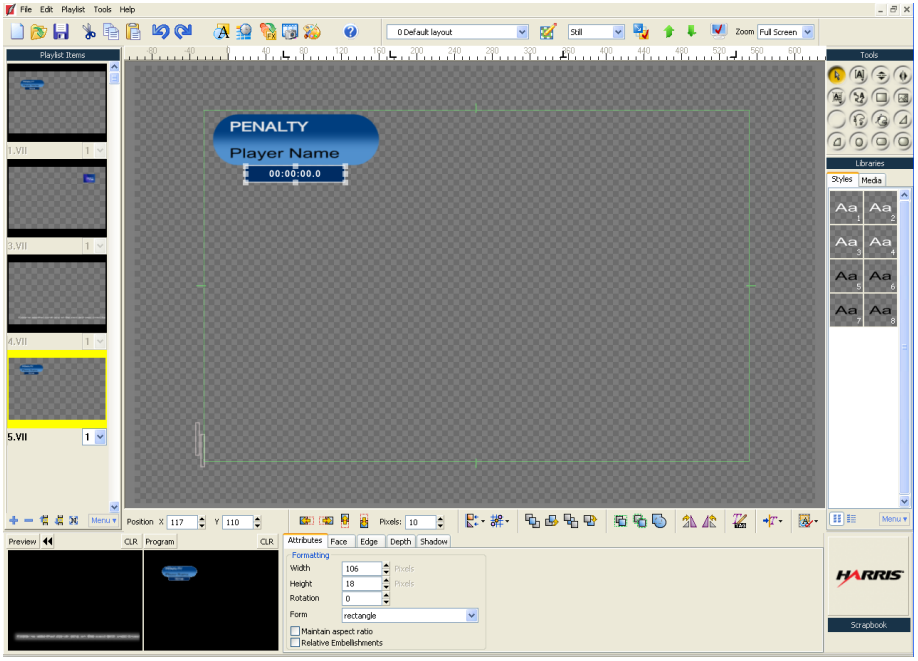


Figure 1-1. CG Tool Open in TitleOne

TitleOne Tools

The TitleOne tools work together to provide a complete graphics solution.

See the following table for details on the tools.

Table 1-1. TitleOne Tools

TitleOne Tool	Description
CG	Creates still, roll, and crawl layouts for video output. Use the extensive text effects to create unlimited custom looks for your layouts. See "CG" on page 93 for details.

Table 1-1. TitleOne Tools

TitleOne Tool	Description
Animation Editor	Animates elements of your CG layout. Apply preset filters and effects to your objects and create templates to assign standard motion to all your layouts. See "Animation" on page 247 for details.
Sequencer	Manages the playlist, applies transitions, and assigns output triggers. Use the flexible output options to take a single event or to output an entire playlist. See "Sequencer" on page 305 for details.
Frame Grab	Captures a single frame from an incoming video signal and saves it as a still image. You can apply video filters to your frame grab to quickly improve the image quality. See "Frame Grab" on page 361 for details.
Paint	**Feature Note** Paint is a purchase option in TitleOne. Creates and edits images while maintaining alpha information. Use the layers to quickly composite images for professional on-screen graphics. See "Paint" on page 433 for details.

Additional TitleOne Features

The Clip option and TitleOne utilities provide additional functionality to your software program. See the following table for a description of TitleOne's additional functionality.

Table 1-2. TitleOne Features

Feature	Description
Clip option	**Feature Note** The Clip option is a purchase option in TitleOne. The Clip option supports clip playback in TitleOne. You can play clips as full-screen layouts or as moving textures on CG objects. The Clip option also allows you to import media objects to a layout and then animate the objects in the Animation Editor. See "Clip Objects" on page 147 to get started with clips. Other video clip functionality is discussed throughout the CG chapter.
Strata Compositing	**Feature Note** Strata is a purchase option in TitleOne. A TitleOne utility that allows unlimited layers per channel and each layer can support stills, graphics, videos, text and animations. Open Strata by selecting Start > All Programs > Harris > Inscriber Strata Utility > Inscriber Strata Utility. See "Strata Configuration Utility" on page 84 for more details.

Table 1-2. TitleOne Features

Feature	Description
Overlay	A TitleOne utility that allows you to easily insert and hide clocks, timers, still or animated logos, bugs, channel IDs, lower thirds, and more. You can control three additional layers of graphics on top of your current output in the Overlay utility. Open Overlay by selecting Tools > Overlay. See "Overlay" on page 73 for more details.
ViaBuilder	A TitleOne utility that creates animations from a series of individual animation frames created with an external animation program. When exporting your animation, save the frames as 32-bit .tga files and ViaBuilder will maintain the animation's alpha. Import .via animations into TitleOne to use in your CG layouts as media objects or moving textures. Open ViaBuilder by selecting Start > All Programs > Harris > TitleOne > Utilities > ViaBuilder. For information on using ViaBuilder, select Help > Contents in the ViaBuilder utility.

Work with Files in TitleOne

TitleOne allows you to save individual layouts or entire playlists as a single file optimized for video output. Any image, video, and font files used in your layouts are saved as referenced files. When you save your working files in TitleOne the path to any image or video files is saved, rather than a copy of the image or font file. Since TitleOne uses referenced files, it is important that you setup your system properly before you start creating playlists and layouts in TitleOne.

Make Transferring Layouts Easy

Setup your system before you start working in TitleOne to ensure that transferring TitleOne layouts or playlist files to another system is easy. Since TitleOne references all image and video files used in your layout, you should save all of your resources in a central folder on your D:\ drive. If you move the file to another system, you must place the folder on a drive with the same letter (in this case the D:\ drive).

1 Use My Computer or Windows Explorer to navigate to the D:\ drive on your TitleOne system.

2 Select File > New > Folder to add a new folder to your D:\ drive. You should store all your image and media files used in your layouts in the new folder.

3 Give the folder a meaningful name, like TitleOneLayoutFiles. When you start working in TitleOne you should save all your resource files in this folder.

If you setup your system with a central folder for storing all of your layouts, playlists, image files, and media files you ensure that transferring layouts to other systems is easy.

The following graphic displays a sample central folder located on the system D:\ drive.

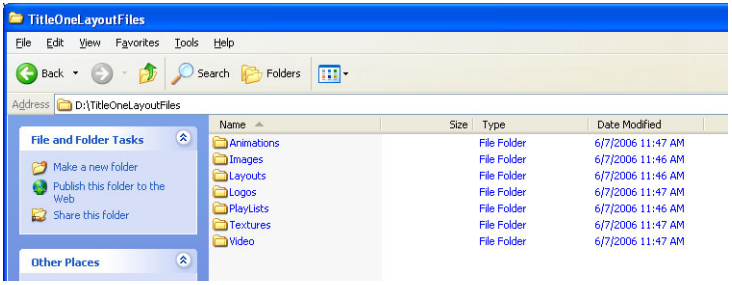

TitleOneLayoutFiles
File Edit View Favorites Tools Help
Back Search Folders
Address D:\TitleOneLayoutFiles
File and Folder Tasks
Make a new folder
Publish this folder to the Web
Share this folder
Other Places
Name Size Type Date Modified
Animations File Folder 6/7/2006 11:47 AM
Images File Folder 6/7/2006 11:46 AM
Layouts File Folder 6/7/2006 11:46 AM
Logos File Folder 6/7/2006 11:47 AM
PlayLists File Folder 6/7/2006 11:46 AM
Textures File Folder 6/7/2006 11:47 AM
Video File Folder 6/7/2006 11:47 AM

Figure 1-2. Sample Central Work Folder

If you reference media files from various locations on your system rather than from a central folder, it becomes difficult to ensure all of your referenced files will transfer with your layout or playlist.

Transfer Your Central Folder to a New System

To move the central folder, complete the following steps.

1 Navigate to your central TitleOne resource folder located on your D:\ drive. In the previous example, you would navigate to D:\TitleOneLayoutFiles.

2 Right-click on the folder and select Copy.

3 Navigate across your local network to the new system.

4 Open the D:\ drive on the new system.

5 Select Edit > Paste.

You must place the folder on a drive with the same letter as your original system—in this example, drive D:\.

After you place the folder on the D:\ drive of the new system, open the layout or playlist in TitleOne. All referenced files should display properly.

Note: You can also transfer the folder using a CD-ROM or jump drive by placing the copied working folder on the external device. Then you can move the folder from the CD-ROM or jump drive to the new system.

Saving Files

You can save individual layouts, or save the entire playlist.

Save Individual Layouts

You can save individual layout files as .scribe files.

To save your layout as a .scribe file, select File > Export > Export CG Layout from the CG module. The layout saves with a .scribe file extension.

The .scribe file is your working layout file. Generally you will save all of your layouts as .scribe files, which include the following features.

- Saves all of your layout information.
- Saves a referenced file path to any media and font files used in the layout.
- Contains animation data.

Save the Playlist

You can save your entire playlist as a .scribelist file.

To save your playlist as a .scribelist file, select File > Save from any TitleOne tool. The playlist saves with a .scribelist file extension.

The .scribelist file is your working playlist file. Generally you will save all your playlists as .scribelist files, which include the following features.

- Saves all of your playlist information, including the information for each layout in your playlist.
- Saves all output information set in Sequencer.
- Saves a referenced file path to any media and font files used in the playlist.
- Contains animation data.

Legacy Files

You can open legacy .icg and .ins files in TitleOne 5.0. Once you open the file in TitleOne, save the file with the .scribe or .scribelist extension.

Note the following limitations of legacy files.

- Legacy clock layouts will convert to a still layout.
- Text colors may look different.
- With the improved accuracy of text placement, you might notice subpixel shifting.
- Legacy draw panels are not support in TitleOne 5.0 layouts.

TitleOne Workspace

As you work in different TitleOne tools, the general layout of your workspace remains the same, making it easy to learn TitleOne operations. Every TitleOne tool includes the toolbars, the playlist, the Program/Preview palette, Attributes palette, and the Scrapbook. As you switch from one TitleOne tool to the next, the options remain in the same location on your computer screen.

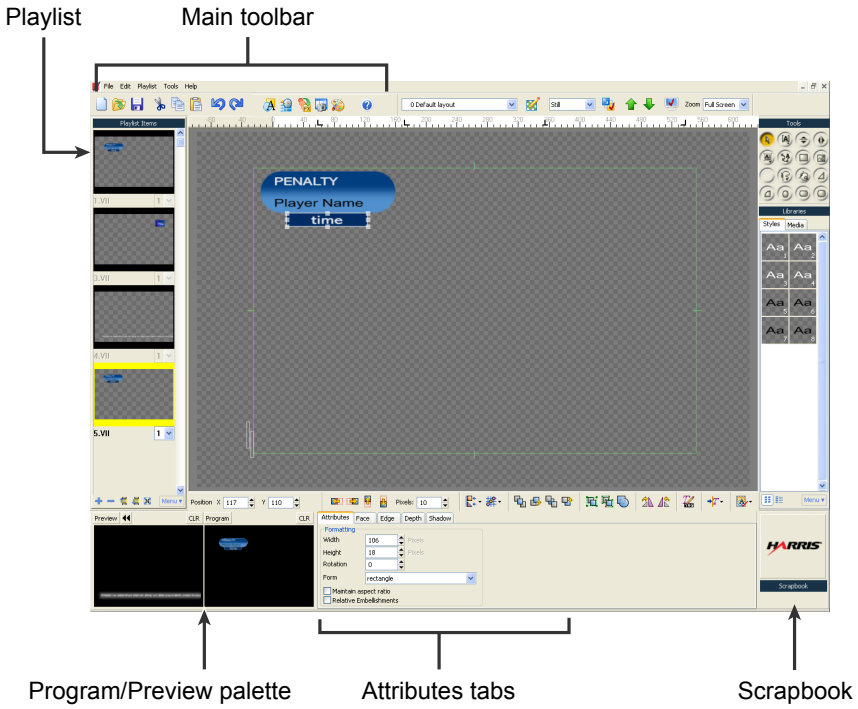


Figure 1-3. TitleOne Workspace

How Do I Use the Main Toolbar?

The toolbars provide shortcuts to TitleOne actions. You have access to the Main toolbar from every TitleOne tool. CG and Sequencer also have toolbars that allow you to perform actions specific to that tool.

The Main toolbar is available in all TitleOne tools and allows you to perform common Windows tasks, as well as switch between the TitleOne tools.

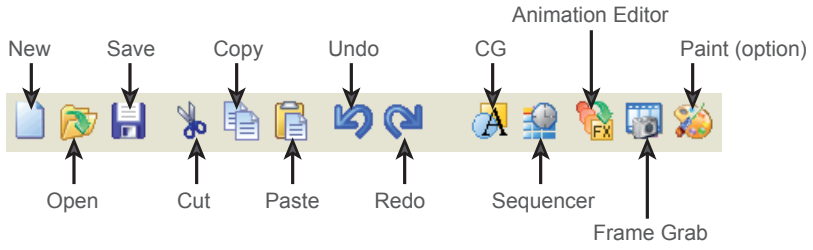


Figure 1-4. Main Toolbar Buttons

For a description of the Main toolbar buttons, see the following table.

Table 1-3. Main Toolbar

Button	Description
New	Opens a new playlist. When you click the New button you are prompted to save the current playlist. TitleOne switches to the CG tool when you start a new playlist.
Open	Launches the Open dialog where you can select an existing playlist (.scribelist file) to open. When you click the Open button you are prompted to save the current playlist. TitleOne switches to the CG tool when you open a playlist.
Save	Opens the Save As dialog where you can save the current playlist to your central working folder, or in another location. See "Make Transferring Layouts Easy" on page 6 for details on working folders.

Table 1-3. Main Toolbar

Button	Description
Cut	Makes a copy of the selected object and removes the object from the workspace. You can paste the object in your workspace. Available for CG, Animation Editor, and Paint.
Copy	Makes a duplicate of the selected object, leaving the original object in the workspace. You can paste the duplicated object in the workspace. Available for CG, Animation Editor, and Paint.
Paste	Places the cut or copied object into your workspace. Available for CG, Animation Editor, and Paint.
Undo	Cancels the last action you made.
Redo	Recreates the canceled action.
CG	Switches to the CG tool. To switch to the CG tool, you can also select Tools > CG or press the F6 key.
Sequencer	Switches to the Sequencer tool. To switch to the Sequencer tool, you can also select Tools > Sequencer or press the F11 key.
Animation Editor	Switches to the Animation Editor. To switch to the Animation Editor, you can also select Tools > Animation Editor or press the SHIFT+F6.
Frame Grab	Switches to the Frame Grab tool. To switch to the Frame Grab tool, you can also select Tools > Frame Grab or press the F7 key.

Table 1-3. Main Toolbar

Button	Description
Paint (option)	Switches to the Paint tool. To switch to the Paint tool, you can also select Tools > Paint or press the F8 key.

How Do I Use the Playlist?

The playlist contains a series of layouts that you can sequence for output. You can access the playlist layouts in every TitleOne tool.

The following table describes how each TitleOne tool uses the playlist.

Table 1-4. Playlist Functionality

TitleOne Tool	Playlist Function
CG	Use CG to create layouts and place the layouts in the playlist. Select an empty slot in the playlist, and then create a layout in the CG work area. Your current layout fills the selected slot in the playlist. Selecting a new slot clears your CG work area and allows you to add a new layout to the playlist.
Sequencer	Use Sequencer to group playlist layouts and apply separate triggers for each group of layouts if necessary. The Sequencer options also allow you to apply a duration and transition to playlist layouts. Once you setup your output controls, you can use the options in Sequencer to run the playlist.
Animation Editor	Use the Animation Editor to animate the CG layouts in the playlist. After adding an animation layout to the playlist in CG, you can switch to the Animation Editor and add motion effects to the layout objects.

Table 1-4. Playlist Functionality

TitleOne Tool	Playlist Function
Frame Grab	The Frame Grab tool does not work directly with the playlist. You can output the frame directly from Frame Grab, or transfer the grabbed frame to CG using the Scrapbook. See "How Do I Use the Scrapbook?" on page 15 for details.
Paint (option)	The Paint tool does not work directly with playlist. You can transfer the Paint layout to CG using the Scrapbook. See "How Do I Use the Scrapbook?" on page 15 for details.

The playlist uses drag and drop functionality, which allows you rearrange layouts by dragging them to a new location in the list. The options located directly below the playlist allow you to control the placement of layouts and provide options to output your layouts.

See "Create a Playlist" on page 312 and "Edit Playlist Options" on page 313 for more details.

How Do I Use the Program/Preview Palette?

The Program/Preview palette allows you to preview your layouts and to view the current layout playing on the program channel. When you output the playlist, the Preview palette displays an image of the next layout, and the Program palette displays an image of the current layout on the program channel.

Preview/Play Single Layouts

You can take an individual layout by dragging the layout to the palette.

- To play a layout immediately on the program channel, drag the layout from the playlist to the Program palette.
- To preview a layout immediately on the preview channel, drag the layout from the playlist to the Preview palette.

Clear the Preview/Program Channel

Use the Program/Preview palette to clear the contents of the program or preview channel.

- To clear the program channel, press the CLR button above the Program palette.
- To clear the preview channel, press the CLR button above the Preview palette.

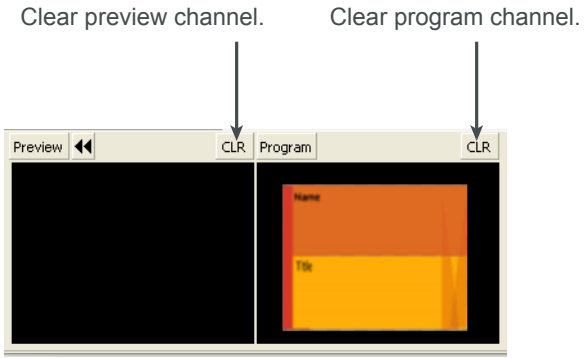


Figure 1-5. Clear Program and Preview Channels

Dual Channel Systems

If you have a dual channel system, the Program/Preview palette controls the two program channels.

You can use the Channel buttons on the Program palette to assign the selected layout to a channel.

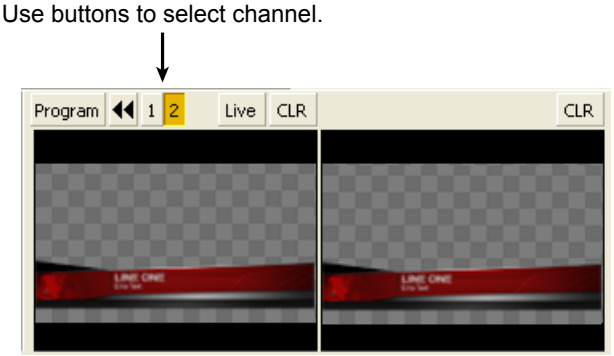


Figure 1-6. Program Palette with Dual Channel System

How Do I Use the Attributes Palette?

The Attributes palette is available at the bottom of the workspace and includes options for the current TitleOne tool.

Use the options on the Attributes palette to edit the selected object in the workspace and to apply options specific to the current TitleOne tool.

How Do I Use the Scrapbook?

The Scrapbook is temporary holding place for layouts, frame grabs, styles, library items, and other TitleOne elements. Use the Scrapbook to transfer objects between TitleOne tools, or to transfer layout styles and elements between CG layouts.

Scrapbook Options

Right-click on the Scrapbook to view the Scrapbook menu. The available menu options change depending on the selected object and the TitleOne tool you are working in.

Table 1-5. Scrapbook Menu

Option	Function
Add	Copies the selected item and places it in the Scrapbook.
Use	Available in Paint. Places the selected Scrapbook item in the workspace.
Use Background	Available in CG. Copies the selected item to the background layer of the current layout, replacing the existing background. If you cannot see the background: 1 Right-click on the CG workspace and select Change Background. 2 In the Set Background dialog, decrease the values in the Transparency fields.

Table 1-5. Scrapbook Menu

Option	Function
Use Texture	Available in CG. Places an image of the selected Scrapbook item on the selected graphic object. 1 Select the graphic object in the CG workspace. 2 Select Use Texture from the Scrapbook right-click menu.
Use Layout/ Title	Available in CG when the selected Scrapbook item is a layout. Replaces the current layout with the selected Scrapbook layout.
Use Logo	Available in CG. Fills the selected logo object in CG with the Scrapbook item. The current logo object is replaced by the Scrapbook item. 1 Select the logo object in the CG workspace, or use the Logo tool to draw a logo object. 2 Select the Use Logo from the Scrapbook right-click menu.
Delete	Removes the selected item from the Scrapbook.
Clear All	Removes all items from the Scrapbook.
Copy to Clipboard	Copies the selected item to the Windows clipboard.
Paste from Clipboard	Adds the item on the Windows clipboard to the Scrapbook.
Info	Opens the Scrapbook dialog that displays the disk space used by the Scrapbook and the number of Scrapbook items.

Save the Scrapbook Contents

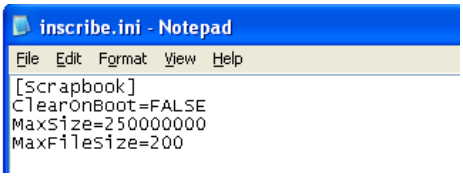
When you close TitleOne, by default the items in the Scrapbook are not saved. Every time you open TitleOne, the Scrapbook is emptied.

To save Scrapbook items when you close the program:

1 Open the inscribe.ini file located in your TitleOne program folder.

2 Add the following lines to the inscribe.ini file.

```
[Scrapbook]
ClearOnBoot=FALSE
MaxSize=250000000
MaxFileSize=200
```



3 Save the inscribe.ini file.

Save Individual Scrapbook Items

TitleOne also includes a setting to save individual Scrapbook items. The item is saved to disk as an Inscriber .vii file.

1 Open the Preferences dialog (File > Preferences).

2 On the Project tab, select the Write Scrapbook Items to Disk option.

3 Click OK to apply the setting and close the Preferences dialog.

4 Close the TitleOne application so the setting is applied.

5 Open the TitleOne application again.

6 Add items to the Scrapbook.

7 To save an individual Scrapbook item, right-click on the Scrapbook and select a Use option. The Save As dialog opens where you can save the Scrapbook item as an Inscriber .vii file.

Set Up Your System for TitleOne Operation

Before you start using the TitleOne program, you should set up your preview channel, program channel, and make sure you have the right settings in the XD-200 Control Panel.

Set Up Your Preview Channel

The available preview options depend on your system setup.

Set Up VGA Preview

To use a VGA preview, you need to connect your second monitor to your system and set up your preview in Windows.

1 Turn off your system.

2 Connect the second monitor to the DVI on the back of the system.

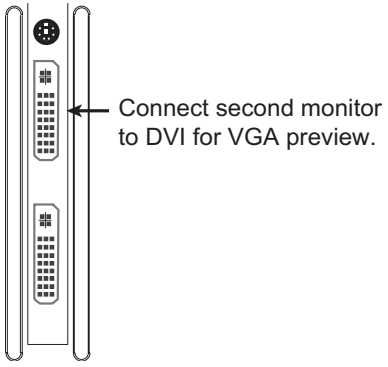


Figure 1-7. Connect Monitor to DVI

3 Restart the system.

4 On the Windows desktop, right-click and select Properties.

5 In the Display Properties dialog, switch to the Settings tab.

6 If necessary, position the 1 and 2 monitor icons to match the following image.

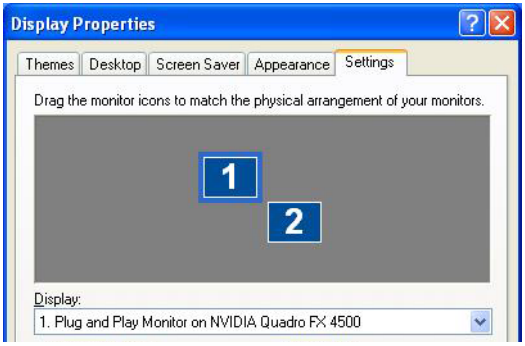


Figure 1-8. Position Monitor Icons

7 Select the 2 monitor icon.

8 Select the Extend My Windows Desktop onto this Monitor checkbox.

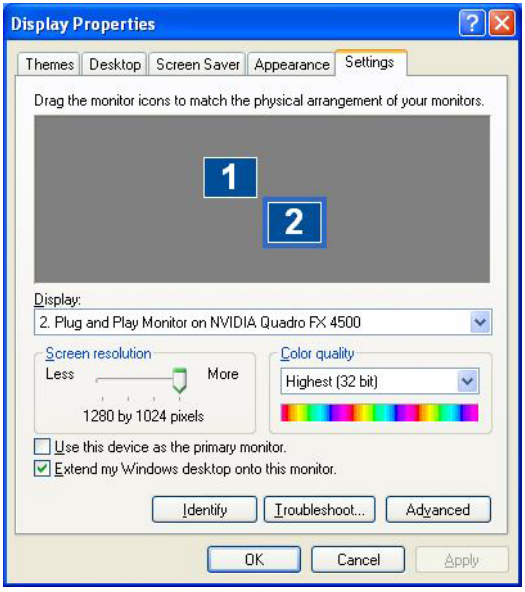


Figure 1-9. Extend Windows Desktop

9 Click Apply.

10 Click the Advanced button. The NVIDIA options open.

11 Click the Start NVIDIA Control Panel button.

Plug and Play Monitor and NVIDIA Quadro FX 4500 P...
General
Adapter
Monitor
Troubleshoot
Color Management
Quadro FX 4500
NVIDIA.
Looking for the NVIDIA Display Control Panel?
All of the NVIDIA control panels have been consolidated into a single application, the NVIDIA Control Panel. It can be launched from the Windows Control Panel or Start Menu.
Start the NVIDIA Control Panel
OK
Cancel
Apply

Figure 1-10. Start NVIDIA Control Panel

12 In the NVIDIA Control Panel, make sure the Advanced View is selected.

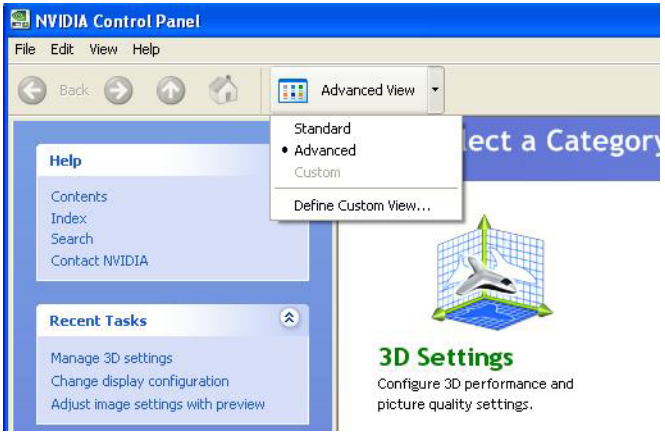


Figure 1-11. Select Advanced View

13 Click the 3D Settings option. The 3D Settings display.

14 In the Appearance section, click the Manage 3D Settings option.

Figure 1-12. Select Manage 3D Settings

15 Select Custom from the Global Presets list.

16 Select the appropriate option from the Feature list.

- If you have a Quadro FX 1500/4500, select the Hardware Acceleration feature, and then select Single Display Performance Mode as the setting.

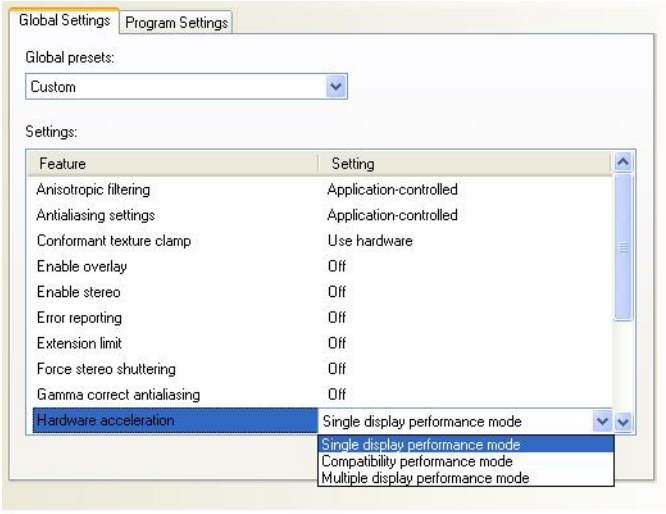


Figure 1-13. Quadro FX 1500/4500 Option

- If you have a Quadro FX 4600, select the Multi-Display/Mixed GPU Acceleration feature, and then select Single Display Performance Mode as the setting.

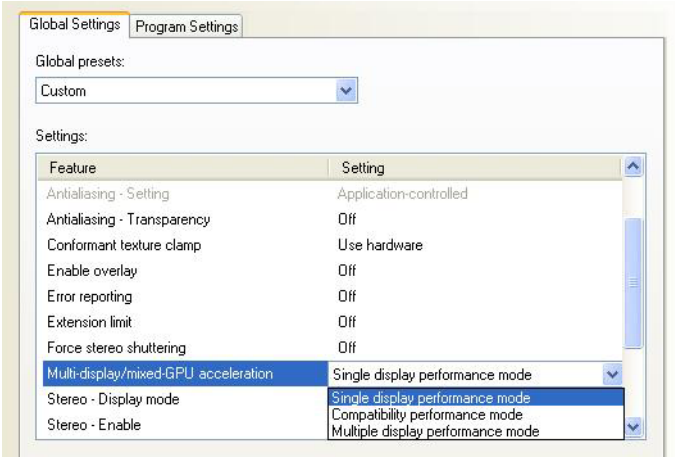


Figure 1-14. Quadro FX 4600 Option

17 Click Apply to save the settings.

18 Restart your system.

Configure VGA Preview

After you set up your VGA preview, you can configure your preview settings in the XD-200 Control Panel.

1 Open the XD-200 Control Panel (Start > Programs > Harris > TitleOne > Configuration Utilities > Phoenix Control Panel).

2 Near the top of the window, click the Preview Control Panel button.

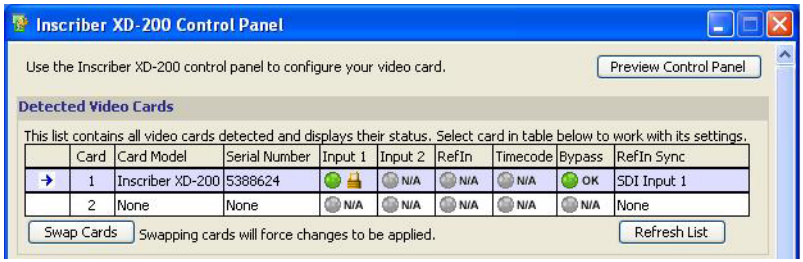


Figure 1-15. Click the Preview Control Panel Button

3 Use the options in the Preview Configuration window to set the resolution of your preview device.

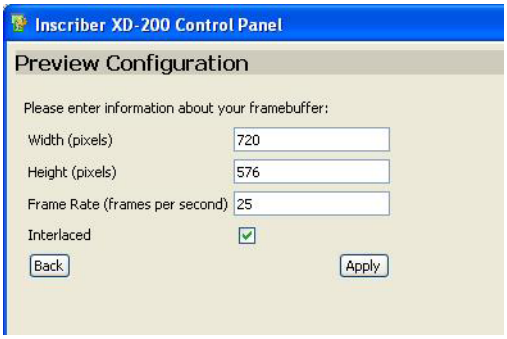


Figure 1-16. Preview Configuration Window

4 Click Apply to apply the changes.

5 Click Back to close the window and return to the XD-200 Control Panel.

6 Click the Close button in the XD-200 Control Panel.

Dual Channel Systems

Dual channel systems allow you to use the second XD-200 video board for your preview output if you are not using both boards as a program channel.

Dual channel system.

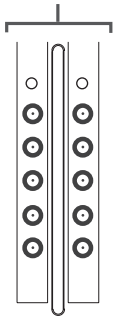


Figure 1-17. Two XD-200 Boards

1 To set one board for preview, open the Strata Compositing utility (Start > All Programs > Harris > Inscriber Strata Configuration Utility > Inscriber Strata Configuration Utility).

2 Click Next on the first and second screens, until the Assign Outputs screen displays.

3 Select the board you want to use for output.

4 From the Designation drop-down list beside the board, select Preview.

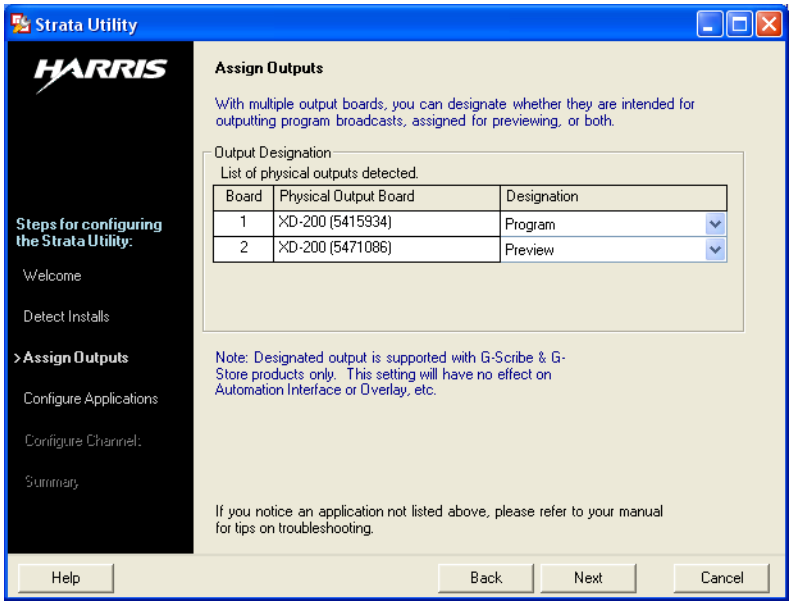


Figure 1-18. Strata Utility Preview Setup

5 Click Next through the remaining screens to apply the setup.

Set Up Your Program Channel

The available options for your program channel depend on your system setup.

Single Channel Systems

Single channel systems include one XD-200 video board for your program output.

Dual Channel Systems

Dual channel systems include two XD-200 video boards. You can set one of the XD-200 cards as your primary program channel.

1 To set one of the XD-200 boards as the primary program channel, open the XD-200 Control Panel (Start > All Programs > Harris > TitleOne > Configuration Utilities > Phoenix Control Panel).

The two cards are listed in the Detected Video Cards list. The first card is the primary program channel.

2 To switch the cards, so the second card becomes the primary program channel, click the Swap Cards button.

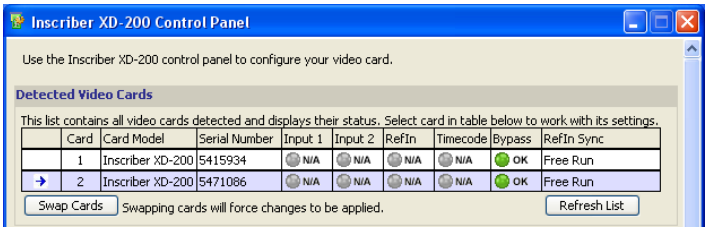


Figure 1-19. Switch Primary Program Channel with Swap Cards Button

Work with SD and HD Files in TitleOne

TitleOne can output both Standard Definition (SD) and High Definition (HD) video formats. For single channel systems you can operate in one mode at a time, either SD or HD. For dual channel systems you can operate both channels in the same mode, or you can use the HD/SD Down Conversion option in the XD-200 Control Panel to output one channel in SD and output the other channel in HD (Start > All Programs > Harris > G-Scribe > Configuration Utilities > Phoenix Control Panel). See page 35 for details on the Down Conversion option.

Since SD and HD layouts have different formatting, SD layouts cannot be used when working in an HD program output, and vice versa. In order to use SD layouts in an HD program, the SD layout must be converted to match the HD format prior to creating the program output. The same is true if you want to use HD layouts in an SD program output.

Conversion Considerations

Native Resolution and Frame Rate are two important criteria to consider when converting between SD and HD formats.

Native Resolution refers to the resolution at which a TV or monitor is designed to display images. Image signals higher or lower than a specified native resolution must be converted to be displayed accurately. For example, the native resolution of an SD image is 720x480 and must be upconverted to display on an HD monitor, which has a native resolution of I920xI080 or I280x720.

Although TitleOne outputs SD in both 4:3 and I6:9 aspect ratios, the native resolution is the same; 720x480. When the lower resolution SD image is upconverted to match an HD format (I920xI080 or I280x720), some of the sharpness of the original image is lost as the pixels are increased in size, not in number, to fit the larger display. In contrast, downconverting from HD to SD results in a sharper image quality as more pixels fill a smaller display.

It is good practise to start with a larger I920xI080 image and scale it down to 720x480, rather than scale up a smaller image.

Frame Rate refers to the number of frames per second (fps) that are displayed on a TV or monitor. The frame rate is 30 fps (NTSC) and 25 fps (PAL). There are two output displays available:

- Interlaced - SD 720x480 (480i NTSC), SD 720x576 (576i PAL), and HD I920xI080 (I080i).
- Progressive Scan - HD I280x720 (720p).

In Interlaced, a frame is divided into two fields, with each field containing half

the number of scanning lines of a complete frame. For NTSC, the second field is scanned 1/60th of a second after the first field; for PAL, the second field is scanned 1/50th of a second after the first field. These two fields are displayed in rapid succession on a TV or monitor. In progressive scan, the complete frame is scanned every 30 fps (NTSC) and 25 fps (PAL).

Interlaced is the most common output for HD (1080i), as it has higher native resolution. However, progressive scan (720p) provides better picture quality when editing with filters and effects that affect motion, including rotating a frame or compositing live-action video with special effects.

SD to HD Conversion

You should create archives of all your SD and HD Inscriber layouts before conversion. You might need to edit the layouts for aesthetic quality when converting between the 4:3 SD aspect ratio and the 16:9 HD aspect ratio.

Select how your graphic elements are scaled when you convert layouts from SD to HD.

1 In your Inscriber HD product, select File > Preferences.

2 Switch to the Character Generator tab.

3 Select one of the following Scale Types: Letterbox, Crop, or Size-To-Fit.

- Letterbox: SD (4:3) to HD (16:9). Scales and centers the SD image to fill the height of the new workspace without changing the 4:3 aspect ratio. This results in black bars on the left and right of the SD image in the HD frame.
- Crop: SD (4:3) to HD (16:9). Scales and centers the SD image to fill the width of the new workspace without changing the 4:3 aspect ratio. This results in cropping the top and bottom of the SD image in the HD frame.
- Size-To-Fit: SD (4:3) to HD (16:9). Scales the SD image to fit the new workspace by pulling or stretching the image to fill the HD frame. This results in a slightly distorted image.
- Size-To-Fit: SD (16:9) to HD (16:9). Scales the SD image to fit the new workspace by zooming the image to fill the HD frame without changing the aspect ratio. This results in a slightly lower quality image as the pixels increase in size to match the larger frame.

4 Click OK to save your preferences and close the dialog.

5 Open your SD template or playlist. A message indicates that the file will be converted, and then displays the progress.

6 When the conversion is complete, save the new HD template or playlist. If required resave using another name to distinguish the HD file from the SD file.

Conversion Limitations

The template files (.scribe) are editable, and the graphic elements within are scaled individually when converted from the 4:3 SD aspect ratio to the 16:9 HD aspect ratio. Where an element is a vector graphic, the scaling is seamless. Where an element is a raster graphic such as a bitmap, the scaling may be subject to certain limitations imposed by the nature of raster graphics. A playlist file (.scribelist) is composed of raster graphics and may be subject to the same limitations.

Some graphic design elements are known to be unsuitable when converted from SD to HD.

- Rendered video clips (Via file) are not resized on conversion between SD and HD.
  - An SD Via file is too small and is in the wrong position in the HD monitor.
  - An HD Via file is too large and is in the wrong position in the SD monitor. It will only display on the top left corner of the monitor.
- Active texture used on characters or draw objects is not resized on conversion from SD to HD. The active texture may not be visible on the character or object in the HD graphic.
- SD bitmaps used as backgrounds for HD output are distorted or "stretched" to fit the monitor.
- SD bitmaps mapped onto graphics are resized to fit the HD monitor, but the results are grainy.

If you intend to use both SD and HD templates, you should maintain a set in both formats if you use a lot of raster graphics and you find results of conversion unsuitable.

If you are working exclusively with SD, consider creating all your layouts in the SD 16:9 aspect ratio, as this will make the transition easier should you upgrade to an SD/HD switchable system in the future. Working in SD 16:9 allows you to see how your layouts work in the HD world.

Configure Your XD-200 Boards

The XD-200 Control Panel lets you configure standard definition and high definition SDI inputs and outputs and reference source. The XD-200 Control Panel displays the status associated with different configurations and allows you to view a test pattern to ensure your configuration is working properly.

Feature Note The XD-200 Control Panel may include options that do not apply to your system.

XD-200 Control Panel Overview

You can use the XD-200 Control Panel, to configure up to two XD-200 boards. The control panel allows you to save multiple configurations for each board.

These steps outline the basic steps for using the XD-200 Control Panel. See the following topics for details on specific tasks.

1 Open the XD-200 Control Panel (Start > All Programs > Harris > TitleOne > Configuration Utilities > Phoenix Control Panel).

2 To configure a video card, select a video card in the Detected Video Cards list. Information about the selected card displays in the Video Card Details section.

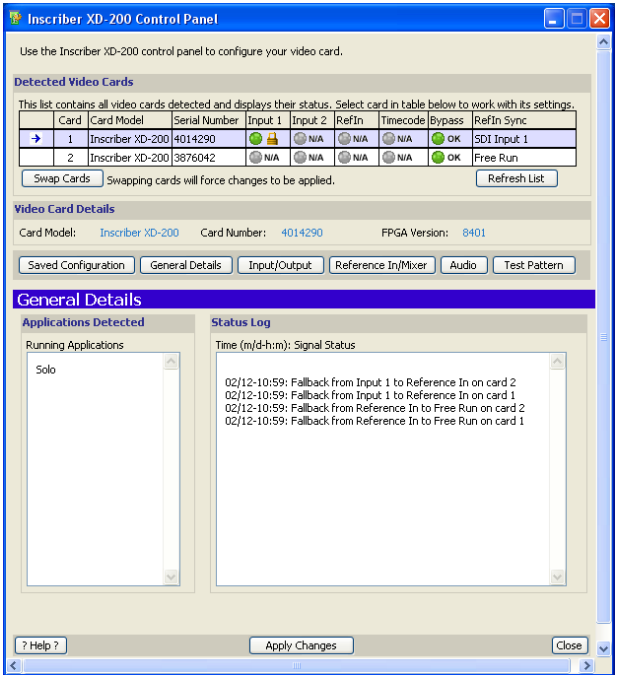


Figure 1-20. XD-200 Control Panel

3 View information about your Inscriber applications and the current signal status in the General Details section.

4 Click the Input/Output button to set your broadcast standard (High Definition or Standard Definition).

5 Click the Reference In/Mixer button to set the genlock source, mixer mode, and keying settings for the video card.

6 Click the Audio button to set your audio input, mixer, and output settings.

7 Click the Test Pattern button to select and output a test pattern.

8 To save the current settings, click the Saved Configuration button.

9 Enter a name for the configuration in the Save Configuration As field.

10 Click the Save button.

11 To open a saved configuration, click the Saved Configuration button.

12 Select a configuration from the Current Configuration list.

13 Click the Load button.

Create a Configuration

You can create, save, and switch between different video card configurations.

1 Select a video card in the Detected Video Cards list.

2 Use the buttons below the Video Card Details section to configure the video card.

- General Details: view information about your Inscriber and InfoCaster applications and the current signal status.
- Input/Output: set your broadcast standard (High Definition or Standard Definition).
- Reference In/Mixer: set the genlock source, mixer mode, and keying settings for the video card.
- Audio: set your audio input, mixer, and output settings.
- Test Pattern: select and output a test pattern.

3 Click the Saved Configuration button.

4 Type in a name for your configuration in the Save Configuration As field.

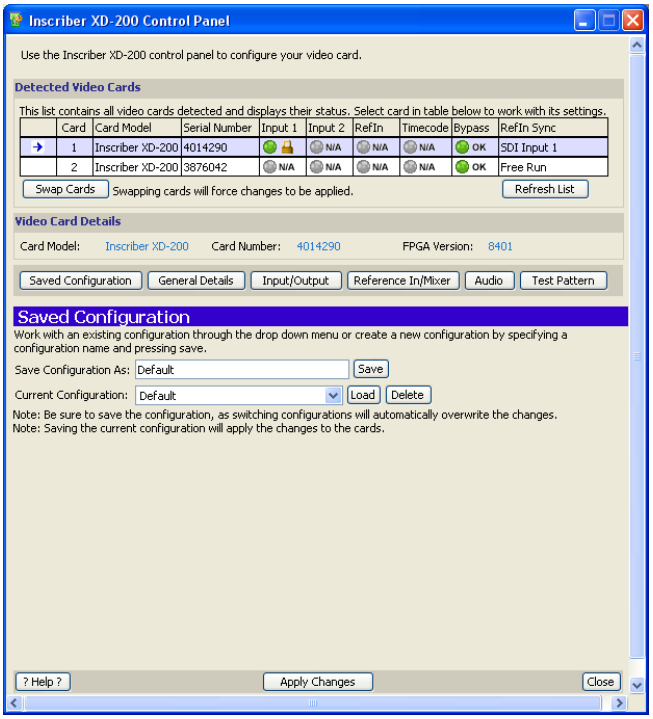


Figure 1-21. Save a Configuration

5 Click Save beside the Save Configuration As field to save the current configuration.

6 To open a saved configuration, click the Saved Configuration button.

7 Select a configuration from the Current Configuration list.

8 Click the Load button.

View System Details

You can view which Inscriber applications are installed on your system, which applications are currently running and the status of the selected video card and reference signals.

1 Select a video card in the Detected Video Cards list. The Detected Video Cards list displays the status of the reference signal.
   - Green: Signal is genlocked to the source.
   - Yellow: Signal is present.
   - N/A (gray): Signal is not available.

2 Click the General Details button.
   - The Inscriber applications that are currently running are listed in the Running Applications window.
   - The Signal Status window displays the status of video input, bypass relays and the output signal for both fill and key channels.

Configure Input/ Output

You can select your broadcast standard (High Definition or Standard Definition) and set whether the card will be used for input and output, or for output only.

1 Select a video card in the Detected Video Cards list.

2 Click the Input/Output button.

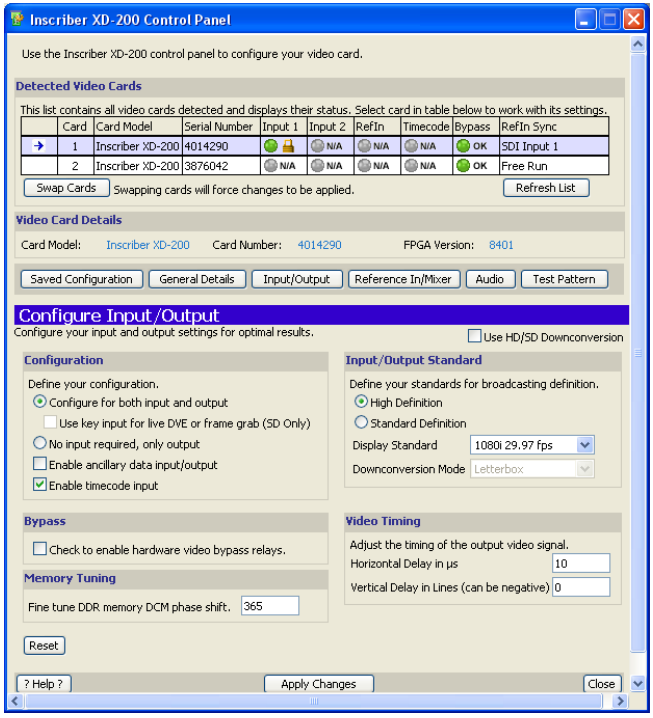


Figure 1-22. Input/Output Configuration Options

3 In the Configuration section, select your configuration options. See the following table for details.

Table 1-6. Configuration Options

Option	Description
Configure for Both Input and Output	Configures the XD-200 for both input and output functions.
Use Key Input for Live DVE of Frame Grab	Sets the key input for the live DVE or frame grab operations. This option is available for SD only. This checkbox is available when you select the above option.
No Input Required, Only Output	Configures the XD-200 for output only.
Enable Ancillary Data Input/Output	In SD, allows your Inscriber application to read/write video data to lines 17-20 on both fields. This option is NTSC specific and has no effect in PAL. In HD, reads/writes vertical ancillary data packets from/to the SDI video stream.
Enable Timecode Input	Sets your Inscriber application to read the timecode from the XD-200. If you do not have a timecode signal connected to the card, make sure the checkbox is cleared. In the Video Cards list colored indicators mark your timecode status. An orange light indicates that timecode is present but not enabled. A green light indicates a valid timecode.

4 In the Input/Output Standard section select whether the video card will broadcast in High Definition or Standard Definition.

5 Select the video display standard in your environment from the Display Standards drop-down list.

6 Select the Use HD/SD Downconversion checkbox to generate your CG content in HD, and have your system output both HD and SD feeds.

Note the following configuration points.

- Optimal configuration is to have an HD video feed going into the first board and an SD video feed going into the second board.
- Both feeds must be genlocked.
- The two feeds must have the exact same frame rate. For example, I080i 29.97 & NTSC, or I080i 25 & PAL, or 720p 59.94 & NTSC, or 720p 50 & PAL.

HD/SD downconversion configures TitleOne for single channel HD (to match board I). Any graphics that play out through TitleOne are output in HD on board I and simultaneously resized and output in SD on board 2.

To determine how the graphics are resized select an option from the Downconversion Mode drop-down list.

- Anamorphic: Resizes the graphics horizontally so all pixels are still visible in the SD feed.
- Center Cut: Displays the center portion of the graphic without displaying the left or right sides.
- Letterbox: Scales the graphic so the I6:9 aspect ratio is maintained. Bars are placed at the top and bottom of the screen to maintain the ratio.

7 Select the Bypass checkbox if you want to send the input video through to output without compositing any graphics.

8 In the Memory Tuning section, use the DCM phase shift value to control the phase of the signal that the FPGA uses to communicate with the DDR memory. In most cases a value between 350 - 400 is appropriate.

Note: Generally, you will not need to adjust the default value. However, if you notice vertical lines across your output try applying a new number.

9 Set the horizontal and vertical timing for the video input.

- Enter a horizontal timing value in the Horizontal Delay field. The value is measured in microseconds, where I is approximately I microsecond.
- Enter a vertical timing value in the Vertical Delay field. The value is measured in lines, where I is approximately I line.

10 Click the Apply Changes button to apply the settings to the current configuration.

Configure Reference In

Synchronize your devices by selecting your genlock source and a backup reference sequence for synchronization.

The Detected Video Cards list at the top of the control panel displays the status of the reference signal.

- Green: Signal is genlocked to the source.
- Yellow: Signal is present.
- N/A (gray): Signal is not available.

1 Select a video card in the Detected Video Cards list.

2 Click the Reference In/Mixer button.

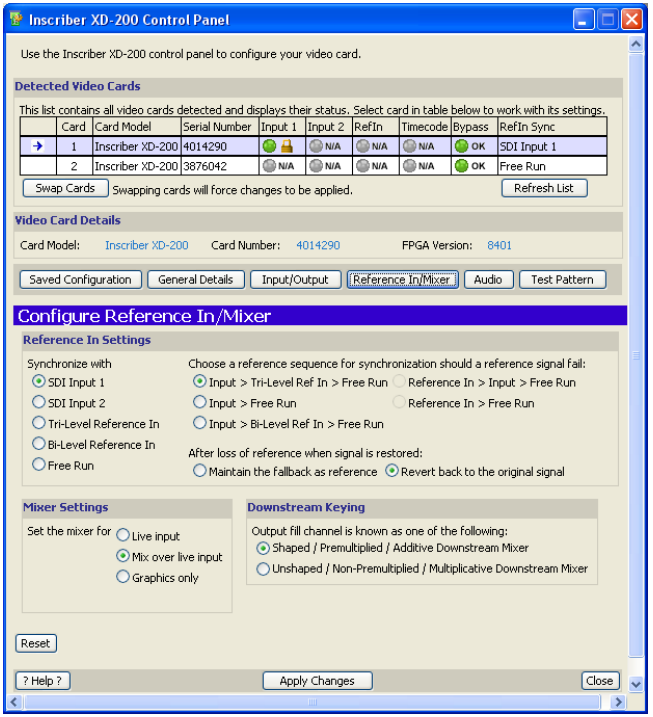


Figure 1-23. Reference In/Mixer Configuration Options

3 In the Reference In Settings section, select the genlock source in your environment: SDI Input 1, SDI Input 2, Tri-Level, Bi-Level, or Free Run.

Note: SDI Input 1 refers to the fill input, marked SDI IN on the back of the system.

SDI Input 2 refers to the key input, marked SDI KEY IN on the back of the system.

4 Select one of the following options in the Reference In Settings section to set the reference sequence for synchronization if a reference sequence fails.

For example, if you select Reference In > Input > Free Run and the Reference In fails the XD-200 falls back to the live input, and if the live input fails the XD-200 falls back to free run mode.

Note: Depending on your configuration, some options may not be available.

5 Determine how to handle the output of a restored signal by selecting one of the following options.

- Maintain the Fallback as Reference: Sets the XD-200 to continue to output the fallback reference in after the signal is restored.

  If the XD-200 falls back to free run during signal loss, when the signal is restored you may notice a glitch in the output. To avoid any disruption in output, you can select this option and continue using the fallback reference in.

- Revert Back to the Original Signal: Sets the XD-200 to output the original reference source when the signal is restored.

6 Click the Apply Changes button to apply the settings to the current configuration.

Configure Mixer Settings

Set the mixer output and downstream keying type.

1 Select a video card in the Detected Video Cards list.

2 Click the Reference In/Mixer button.

3 In the Mixer Settings section, select the mixer standard for your environment.

- Select Live Input to output the video signal only for testing or frame grabs.
- Select Mix Over Live Input to output mixed video and graphics for pass through keying (internal key).
- Select Graphics Only to output a key and fill signal for downstream keying (external key).

4 In the Downstream Keying section, configure the output fill channel by selecting either the Shaped or Unshaped option.

Overall performance is better when Shaped is selected. You should only select the Unshaped option if you use an older keyer that only accepts unshaped input.

5 Click the Apply Changes button to apply the settings to the current configuration.

Configure Audio Settings

Use the Audio button to access the audio options for the XD-200 where you can configure your audio settings.

When you select an option in the Input, Mixer, or Output section details are provided in the description box near the bottom of the control panel.

1 Select a video card in the Detected Video Cards list.

2 Click the Audio button.

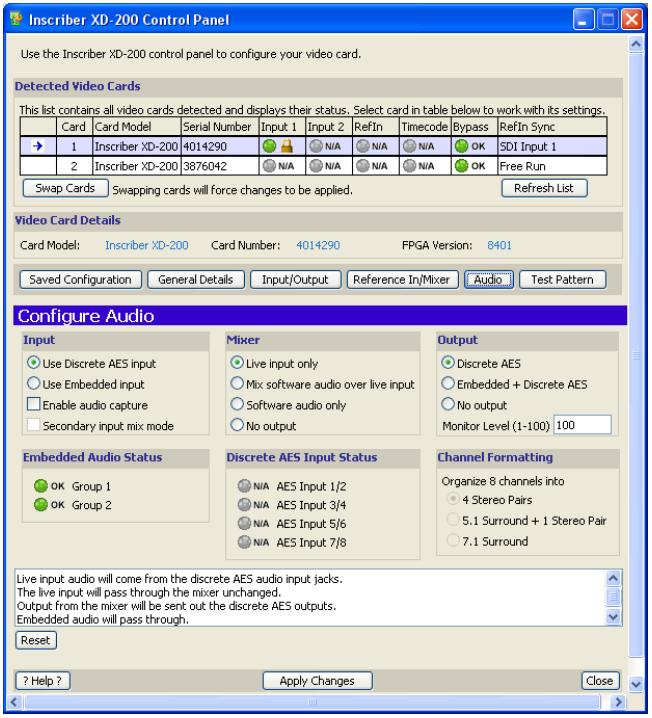


Figure 1-24. Audio Configuration Options

3 In the Input section, use the options to select where you are receiving the audio: Discrete AES input or Embedded input.

4 To capture incoming discrete or embedded audio from the XD-200, select the Enable Audio Capture checkbox. Depending on the capabilities of your capture application, you can route this audio through Phoenix or capture it to disk.

5 Select the Secondary Input Mix Mode checkbox to mix all audio inputs and output them on audio output 1.

For example, if your system is configured with 4 stereo pairs, stereo inputs 2, 3, and 4 will be mixed with stereo input 1 and any program audio from the software, and then output on audio output 1.

6 In the Mixer section, select one of the following options.

- Live input only.
- Mix software audio over live input.
- Software audio only.
- No output.

7 In the Output section, use the options to setup your audio output configuration.

- Discrete AES
- Embedded + Discrete AES
- No output

8 If you have a monitor jack on the back of your XD-200, you can adjust the volume of the jack using the Monitor Level option. Decrease the value to decrease the volume.

9 View the status of your audio setting in the Embedded Audio Status and Discrete AES Input Status sections. To check your status you can loop your input to your output.

10 Use the Channel Formatting section to select your channel setup options: 4 Stereo Pairs, 5.1 Surround + 1 Stereo Pair, or 7.1 Surround.

Note: The Channel Formatting options are only available for HD.

11 Click the Apply Changes button to apply the settings to the current configuration.

View Test Pattern

You can select and view a test pattern to test your configuration.

1 Select a video card in the Detected Video Cards list.

2 Click the Test Pattern button.

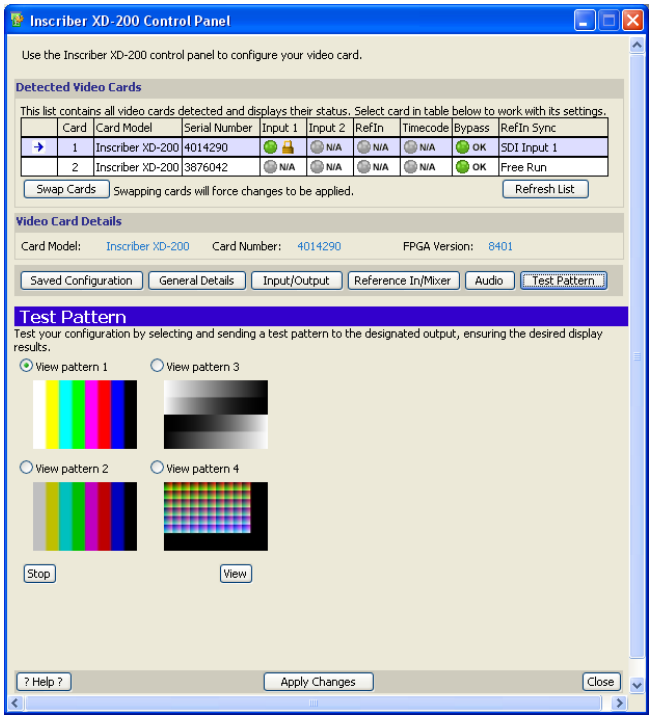


Figure 1-25. Test Pattern Options

3 Select one of the test pattern options.

4 Click View. The test pattern you selected is sent to your output device so you can test your configuration.

5 Click Stop to stop the output of the test pattern.

Save a Configuration

You can save the current configuration settings.

1 Click the Saved Configuration button.

2 Type in a name for your configuration in the Save Configuration As field.

3 Click Save beside the Save Configuration As field to save the current configuration.

Load a Configuration

After you have saved your XD-200 video and audio settings, you can load the configuration from the Current Configuration list.

1 To open a saved configuration, click the Saved Configuration button.
2 Select a configuration from the Current Configuration list.
3 Click the Load button.

The configuration settings load in the XD-200 Control Panel.

Edit a Configuration

You can load an existing video card configuration and make changes to it.

1 To open a saved configuration, click the Saved Configuration button.
2 Select a configuration from the Current Configuration list.
3 Click the Load button.
4 Make any changes to the configuration of video cards on your system by selecting a video card in the Detected Video Cards list.
5 Use the buttons below the Video Card Details to configure the video card.
6 To save the updated configuration, click the Saved Configuration button.
7 Ensure the correct configuration name is listed in the Save Configuration As field.

If you want to change the name of the configuration, enter a new name in the Save Configuration As field.

8 Click Save.

Delete a Configuration

You can delete a video card configuration from the Phoenix Control Panel.

1 Click the Saved Configuration button.
2 Select the configuration from the Current Configuration drop-down list.
3 Click the Delete button. All of the video card's configuration settings will be removed from your system.

Chapter 2

Output

Output solutions available in TitleOne.

Output in TitleOne

To give you the playback flexibility you need, TitleOne is equipped with several output options that are outlined in this chapter. TitleOne includes a variety of output options that allow you to create a workflow specific to your environment. Your choice of output may impact how you work in TitleOne. Review the playback solutions described in this section to decide how you can make TitleOne work best for you.

TitleOne Output Capabilities

The playback capabilities in TitleOne allow you to output layouts from any TitleOne tool, output the playlist from Sequencer, or output using a TitleOne utility. The following table provides an overview of the available options.

Table 2-1. TitleOne Output Options

Output Option	Description
Global Output	The global output options allow you to preview or take a layout from any TitleOne tool (CG, Sequencer, Media Store, Animation Editor, Frame Grab, and Paint). For details see "Global Output" on page 46. **Feature Note** Media Store is a purchase option in TitleOne.
Sequencer Output	The Sequencer output options are available in Sequencer only, and control the output of the entire playlist. For details see "Sequencer Output" on page 51.
Navigate Dialog	The Navigate dialog is available in any TitleOne tool and allows you to quickly select and take layouts using your keyboard. For details see "Navigate Dialog" on page 54.

Table 2-1. TitleOne Output Options

Output Option	Description
Shot Box Palette	The Shot Box palette is available in Sequencer and Media Store, and allows you to select and output single events or media files. For details, see "Shot Box Palette" on page 56. **Feature Note** Media Store is a purchase option in TitleOne.
RapidFire	The RapidFire feature is available in CG and Sequencer and allows you update and take layouts with the speed you need for live coverage. For details see "RapidFire" on page 60.
Overlay	The Overlay utility controls the output of CG objects saved as .scribe files. Overlay displays the objects on their own layer over the current running playlist. For details see "Overlay" on page 73.
Strata Compositing	The Strata utility plays what appears to be separate channels, as one channel on output. This enables real-time compositing of multiple virtual channels into a single physical channel. Use Strata to schedule and play events independently on separate layers at the same time. For details see "Strata Configuration Utility" on page 84.

Global Output

The global output options are always available in TitleOne, whether you are working in CG, Sequencer, Media Store, Animation Editor, Frame Grab, or Paint. Look through the options to find the best output solution for you.

Feature Note Media Store is a purchase option in TitleOne.

TitleOne Output Options

The following table describes the global output options available in TitleOne.

Table 2-2. TitleOne Output Options

Task	Options
Preview a single layout before going to air	To preview a single media file on your preview channel, drag the layout from the playlist to the Preview palette.
Take a single layout to air	Use any of the following options to output a single layout. • Select the layout in the playlist and press ENTER on the keyboard number pad. Pressing ENTER outputs the layout, but does not load the next event in the playlist to the preview channel. • Double-click on the layout thumbnail in the playlist. • Drag the layout from the playlist to the Program palette. The Program palette is always available in TitleOne.

Table 2-2. TitleOne Output Options

Task	Options
Stop output immediately	To stop output immediately press the Pause key. The current layout freezes on-screen. You can click the CLR button above the Program palette to clear the on-screen display. To stop output after the current event completes playback, click the Stop button on the Run tab in Sequencer. See "Stop Playback" on page 53 for details.

Select a Program Channel

If you have a dual channel system, you can send your layouts to channel I or channel 2. Use the playlist or the Program palette to select the channel. The Program/Preview palette controls two program channels when you have a dual channel system.

- Playlist: Use the Channel drop-down list to select the channel for the layout.

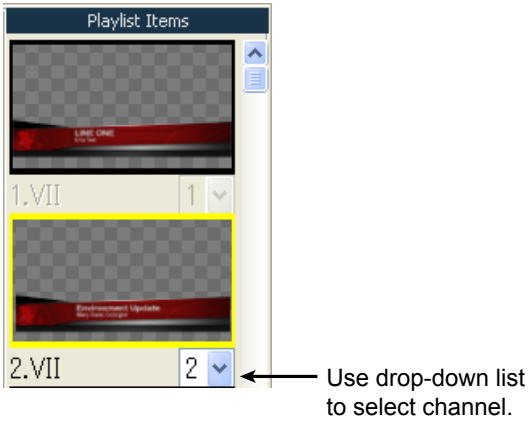


Figure 2-1. Channel Drop-Down List

- Program palette: Use the Channel buttons on the Program palette to

assign a channel to the selected layout.

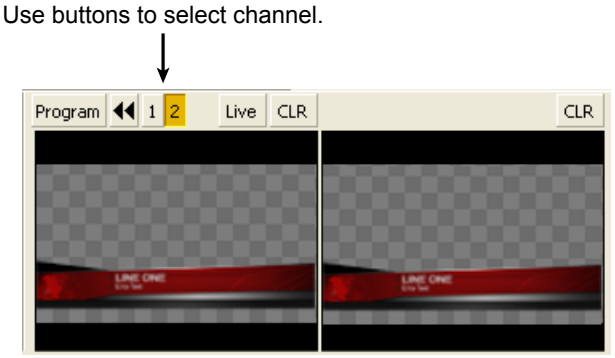


Figure 2-2. Channel Buttons

Output Two Layouts Simultaneously

When you have a dual channel system, you can output two layouts simultaneously. One layout plays on channel I and one layout plays on channel 2.

To output the linked layouts simultaneously:

I Select the first layout in the playlist and assign the layout to channel I.

2 Press SHIFT+MINUS (-) key on the number pad to setup the event.

3 Select the second layout in the playlist and assign the layout to channel 2.

4 Press SHIFT+MINUS (-) key on the number pad to setup the event.

5 To take both events, press the ENTER key on the number pad. The first layout plays on channel 1 and the second layout plays on channel 2.

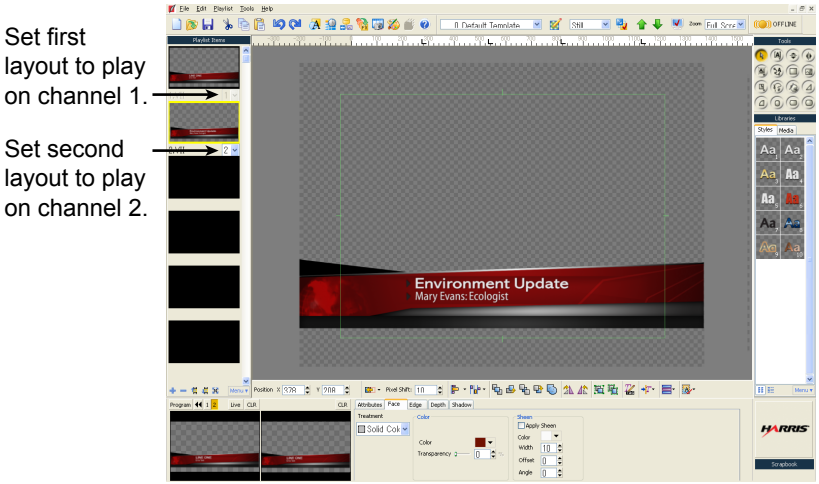


Figure 2-3. Set Up Layouts on Separate Channels

Clear the Output

You can clear the content of program channel or the preview channel using the Program/Preview palette.

- To clear the contents of the Preview palette, click the CLR button above the Preview palette.
- To clear the contents of the Program palette, click the CLR button above the Program palette.

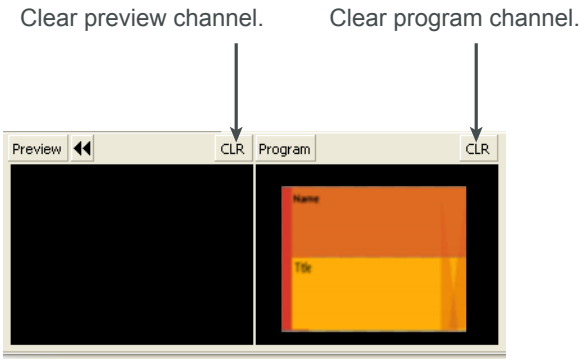


Figure 2-4. CLR Buttons Clear Channel Content

Output Rolls and Crawls

Sequencer includes options for changing the output speed of rolls and crawls, and for playing your page-formatted (multi-page) rolls and crawls.

Change Roll/Crawl Output Speed

You can change the speed of a roll or a crawl during output using keyboard shortcuts.

- To increase the roll/crawl speed, press ALT+SHIFT+Page Up.
- To decrease the roll/crawl speed, press ALT+SHIFT+Page Down.

Pause Roll/Crawl Playback

You can pause the playback of rolls and crawls using the PAUSE key.

1 During the roll/crawl output, press the PAUSE key to pause the output.

2 Press the PAUSE key again to resume output.

Sequencer Output

Sequencer is a powerful TitleOne tool that allows you to prepare events for output, prepare the playlist for output, select trigger types for output, and run the entire playlist. The following instructions describe how to output your playlist in Sequencer. You can find these instructions, and information on all the Sequencer options in the chapter "Sequencer" on page 305.

Move Online/Offline

The Run tab includes the output options for Sequencer, and is only available after you move the playlist online. When you switch to Online mode, Sequencer renders your events and prepares them for output. After all the events are rendered, the Run tab becomes available.

Move Online

To move online:

- Click the Offline/Online toggle button on the toolbar.

Figure 2-5. Offline/Online Toggle Button

  When you click the Offline button TitleOne moves the current playlist online, and the button changes to read Online. You can click the Online/Offline button again to move offline.

- Press CTRL+SHIFT+O.

Move Offline

To move offline:

- Click the Offline/Online toggle button on the toolbar.

  When you click the Online button TitleOne moves the current playlist offline, and the button changes to read Offline. You can click the Online/Offline button again to move online.

Figure 2-6. Offline/Online Toggle Button

- Press CTRL+SHIFT+O.

Preview an Event

You can use the Preview button on the Run tab to preview the selected event.

1 Select the event you want to preview.

2 If you need to, press CTRL+SHIFT+O to move online and access the Run tab.

3 Switch to the Run tab.

4 Click the Preview button. The event displays in the Preview palette and on your preview monitor.

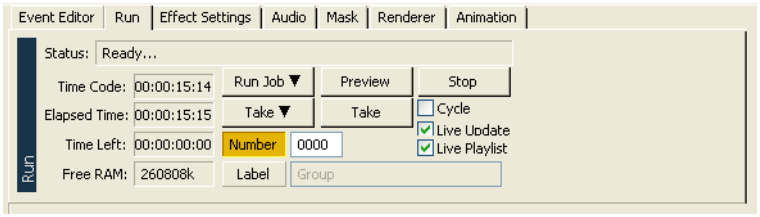


Figure 2-7. Run Tab

Take a Single Event

Use the Take buttons on the Run tab to take a single event.

1 Select the event you want to take.

2 If you need to, press CTRL+SHIFT+O to move online and access the Run tab.

3 Switch to the Run tab.

4 Use the one of the following options to take your event.

- Click the Take Down button (Take ▼) on the Run tab to take the current event and load the next event to the preview channel. You can also use the PLUS (+) key on the number pad for the same effect.
- Select the event in the Sequencer playlist and press the PLUS (+) key on the number pad. Pressing the PLUS (+) key outputs the layout and loads the next event in the playlist to the preview channel.

  If you select a new event in the sequence and press the PLUS (+) key, the previously setup event will take to air. Set up the selected event by pressing the number pad MINUS (-) key. Then press the number pad PLUS (+) key to output the event.

- Click the Take button (Take) on the Run tab to take the current event without loading the next event to the Preview Channel. You can also use the ENTER key on the number pad for the same effect.

Run the Job

Use the Run Job button on the Run tab to run the playlist from the selected event.

1 Select the event where you want to start playback.

2 If you need to, press CTRL+SHIFT+O to move online and access the Run tab.

3 Switch to the Run tab.

4 Click the Run Job button.

Stop Playback

Use the Stop button on the Run tab to stop output after the current event completes playback.

1 Switch to the Run tab.

2 Click the Stop button. Output stops after the current event completes playback.

Note: To stop playback immediately, press the Pause key. The current event freezes on-screen. You can click the CLR button above the Program palette to clear the screen.

Monitor Output Activity

When your playlist is online and you have started playback, you can switch to the Run tab to monitor your output activity.

The Run tab displays the current time code, the amount of time elapsed for the running playlist, the amount of the time left to complete playback, and the amount of free RAM currently available.

Navigate Dialog

For quick event selection and playback, use the Navigate dialog. The Navigate dialog is available in any TitleOne tool and greatly improves your ability to respond to demanding on-air situations.

Output with the Navigate Dialog

To output an event using the Navigate dialog, complete the following steps.

1 To open the Navigate option, press CTRL+SHIFT+J (or Playlist > Navigate).

If you do not have the Show filename in Job Strip option selected in the Preferences dialog (File > Preferences) a message displays. Click Yes to enable the option.

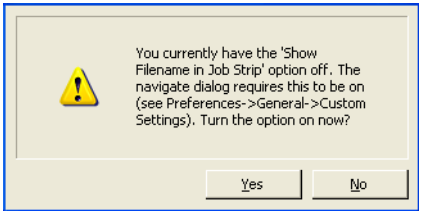

You currently have the 'Show Filename in Job Strip' option off. The navigate dialog requires this to be on (see Preferences->General->Custom Settings). Turn the option on now?
Yes
No

Figure 2-8. Show Filename Message

2 In the Navigate dialog, select an event by entering the event number in the dialog.

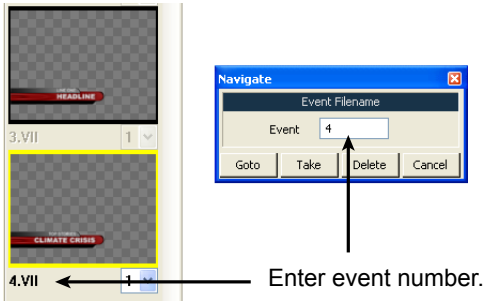


Figure 2-9. Event Number in Navigate Dialog

3 Use the keyboard to select, output, and delete events in the playlist.

See the following table for details.

Table 2-3: Navigate Dialog Options

Task	Shortcut Key
Go to event	• keyboard ENTER
Take event	• number pad ENTER
Delete event	• DELETE key
Close Navigate dialog	• ESC key

Shot Box Palette

You can use the Shot Box to quickly select playlist layouts or Media Store files. Once you locate the layout or media file, you can assign the item to a Shot Box button for quick recall, or output the selected item.

The Shot Box palette is available in the Sequencer and Media Store tools.

Feature Note Media Store is a purchase option in TitleOne.

Select Playlist Layouts

To select a playlist layout with the Shot Box, you can quickly enter the layout number in the Shot Box Number field. Entering the layout number selects the layout slot in your playlist. For example, if you enter 3, TitleOne selects the layout in slot three.

1 Select File > Open to load your playlist. All playlists have a .scribelist file extension.

2 Select File > Preferences to open the Preferences dialog.

3 Switch to the Project tab and clear the Show Filename in Job Strip checkbox. When this checkbox is cleared, the layout numbers display in the playlist rather than the file names.

4 Click OK to close the Preferences dialog.

5 Switch to Sequencer (Tools > Sequencer).

6 On the Shot Box palette, click the Store/Play toggle button to read Play.

- When the button reads Play, TitleOne selects playlist layouts.
- When the button reads Store, TitleOne selects files in Media Store.

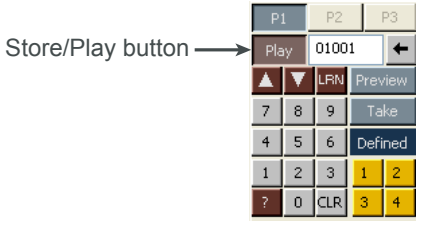


Figure 2-10. Store/Play Button on Shot Box Palette

7 Enter the layout slot number in the Shot Box Number field.

Note: When you enter the layout slot number, TitleOne selects the layout in the appropriate playlist slot. For example, if you enter 5, TitleOne selects the layout in slot five. If you move the layout or place a new layout in slot five, TitleOne selects the new layout.

8 To select the layout, press ENTER on the main keyboard—not the number pad ENTER key.

Note: If you press the number pad ENTER key, the layout plays on your program channel. The number pad ENTER key immediately outputs the selected layout.

Select Media Store Files

Feature Note Media Store is a purchase option in TitleOne.

To select a media file from Media Store, you can enter the image thumbnail number in the Shot Box Number field. Entering the image thumbnail number selects the appropriate media file in the Media window.

1 In TitleOne, switch to Media Store (Tools > Media Store).

- On the Shot Box palette, click the Store/Play toggle button to read Store.

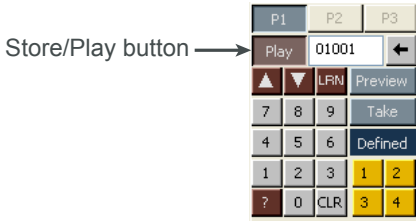


Figure 2-11. Store/Play Button with Store Selected

- When the button reads Store, TitleOne selects media files in Media Store.
- When the button reads Play, TitleOne selects playlist layouts.

2 Select the Browse or Build folio containing the media files you want to select. The folio's media files display in the Media window.

See "Set and Browse Set Folios" on page 420 for details on folios.

3 Enter the media thumbnail number in the Shot Box Number field.

4 To select the media file, press the ENTER key on the main keyboard—not the ENTER key on the number pad.

The number pad ENTER key performs the following actions when the Store/Play toggle button reads Store.

- If the Shot Box LRN button is not selected, the number pad ENTER key outputs the selected layout.

  If a Shot Box palette program channel button is selected, the layout outputs to the selected channel. If no program channel button is selected, the layout outputs to the program channel specified for the file on the Media Store module Transition tab.

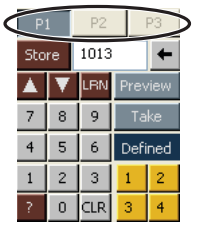


Figure 2-12. Program Channel Buttons on Shot Box Palette

- If the Shot Box LRN button is selected, the number pad ENTER key adds the selected layout to the playlist.

Assign a Media File to a Defined Button

Feature Note Media Store is a purchase option in TitleOne.

You can assign media files from the Media window to a Defined button on the Shot Box for immediate output. There are four available defined buttons that are labeled 1 - 4. You can click on the button at any time to output the media file in real-time on the program channel.

1 In TitleOne, switch to the Media Store tool (Tools > Media Store).

2 Select the Browse or Build folio containing the media files you want to add to the Shot Box button. The folio's media files display in the Media window.

See "Set and Browse Set Folios" on page 420 for details on folios.

3 Drag the media file to one of the available yellow buttons on the Shot Box, labeled 1 - 4.

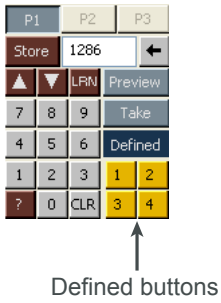


Figure 2-13. Defined Buttons

4 In the message dialog, click Yes to confirm that you want to assign the media file to the button.

5 To output the media file, click the Shot Box button. The program channel plays the selected media file immediately.

Output Selected Items

The Shot Box palette allows you to quickly output your playlist layouts and Media Store files.

- To preview the selected item, click the Preview button on the Shot Box palette.
- To output the selected item, click the Take button on the Shot Box palette.

RapidFire

RapidFire™ allows you to perform layout operations with the speed you need for live event coverage. You can operate RapidFire with keyboard commands to quickly take, clear, recall, and update your layouts. To make output even easier, use the Auto Text feature to insert commonly used text with greater accuracy and speed. The RapidFire Keyboard option provides additional keys that perform standard commands, allowing operators to work more quickly and effectively.

Key Features

You can use RapidFire to quickly perform layout operations, including the following.

- Read a layout from the playlist or registry.
- Write a new or modified layout to the playlist.
- Write a modified layout to the registry. (You cannot create new registry entries using RapidFire.)
- Take a layout to air.
- Clear all output or individual Strata layers.
- Clear a layout.
- Read a layout from or write a layout to Media Store.
- Read a layout from the working directory.
- Write a layout to the working directory.
- Add Auto Text to a layout. For information on the Auto Text feature, see "Update a Layout with Auto Text" on page 69.

Feature Note Media Store and the Strata Configuration Utility are purchase options in TitleOne.

Set Up RapidFire

Set up the conditions for the proper operation of RapidFire.

Before Launching RapidFire

Verify the following conditions.

- Ensure that RapidFire is enabled on the Tools menu, Tools > RapidFire.

  When you enable RapidFire, the keys on the number pad are reprogrammed to perform RapidFire operations. To return to normal function, you must disable RapidFire on the Tools menu.

- Ensure that NumLock is on for the number pad.
- If you are using RapidFire in the Sequencer module, ensure that all your groups are expanded. RapidFire does not work correctly when Sequencer groups are collapsed.

Open RapidFire

To open RapidFire, perform one of the following actions.

- Press FI0.
- Type a number on the number pad.

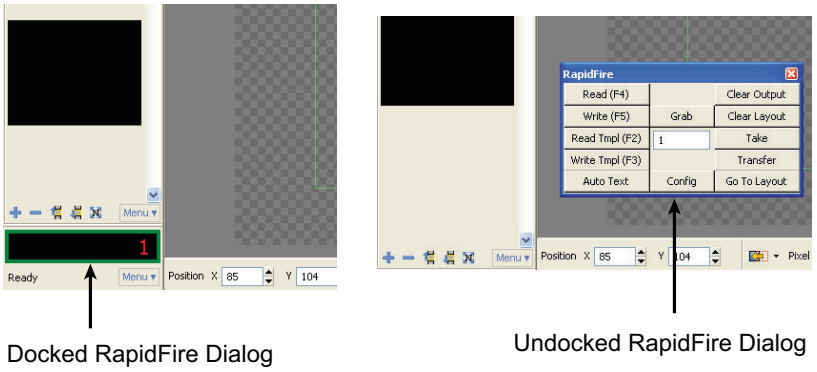


Figure 2-14. RapidFire Dialog - Docked and Undocked

By default, the RapidFire dialog is docked below the playlist.

If you enter a number using the number pad, the number is displayed in the text field in the RapidFire dialog.

To undock the RapidFire dialog:

l Drag the RapidFire dialog from its default location. For example, drag the dialog onto the workspace. The undocked RapidFire dialog displays on top of the TitleOne window.

  You can drag the RapidFire dialog anywhere on your screen.

To dock the RapidFire dialog:

l Drag the RapidFire dialog to the playlist.

Hide the RapidFire Dialog

To hide the RapidFire dialog:

1 Click the RapidFire dialog text field.

2 Press the ESCAPE key.

Note: Hiding the dialog does not disable RapidFire on the Tools menu.

Use RapidFire

You can access RapidFire functionality using the following methods.

- Keyboard. You can operate RapidFire with keyboard commands. See "RapidFire" on page 529 and "RapidFire Keyboard" on page 532. For a complete list of TitleOne shortcut keys, see "Shortcut Keys" on page 521.
- RapidFire dialog.

Docked RapidFire Dialog

When the RapidFire dialog is docked, use the RapidFire Menu button to access key RapidFire functionality.

1 In the RapidFire dialog, click the Menu button.

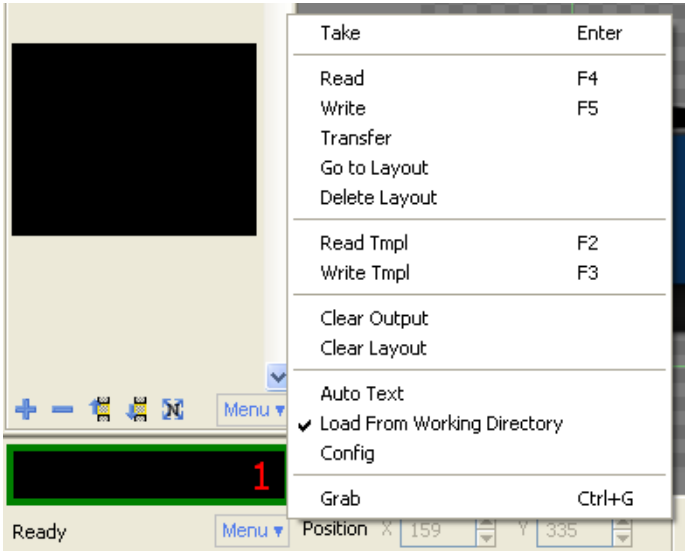


Figure 2-15. RapidFire Dialog Menu

2 From the menu, select a RapidFire command.

Undocked RapidFire Dialog

The undocked RapidFire dialog provides single-click access to key RapidFire functionality.

1 In the RapidFire dialog, click a button.

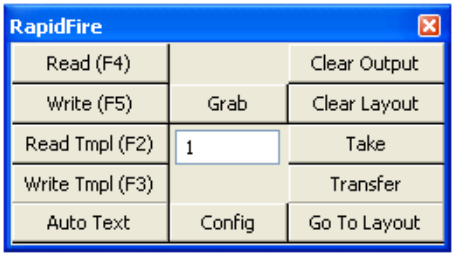


Figure 2-16. Undocked RapidFire Dialog

Perform a RapidFire Operation

You can perform most RapidFire operations with a single keystroke (if you purchased the RapidFire Keyboard option), shortcut key, or mouse click.

To perform some operations, you must specify a layout, template, or other item for the operation, for example, a template to read from the registry. For these actions, complete the following two steps.

1 Specify an item, for example, a layout or an Auto Text string.
   - Enter the item number in the RapidFire text field using the number pad.

2 Specify an operation using one of the following methods.
   - Press a shortcut or RapidFire keyboard key.
   - Click a command in the RapidFire dialog.

For a complete list of RapidFire shortcut keys, see "RapidFire" on page 529.

For a complete list of the RapidFire keyboard keys, see "RapidFire Keyboard" on page 532.

Scratch Layout

RapidFire automatically creates a layout at the bottom of the playlist called Scratch.vii that is used for all RapidFire operations. For example, layouts are read into the Scratch.vii layout whenever a read operation is performed, and the contents of the Scratch.vii layout are used for write operations.

Set the Working Directory

You can specify the working directory in which RapidFire reads and writes layout files.

1 Open the InsertText dialog using one of the following methods.

- Press SHIFT+AUTO TEXT using the RapidFire keyboard.
- Click Config in the RapidFire dialog.

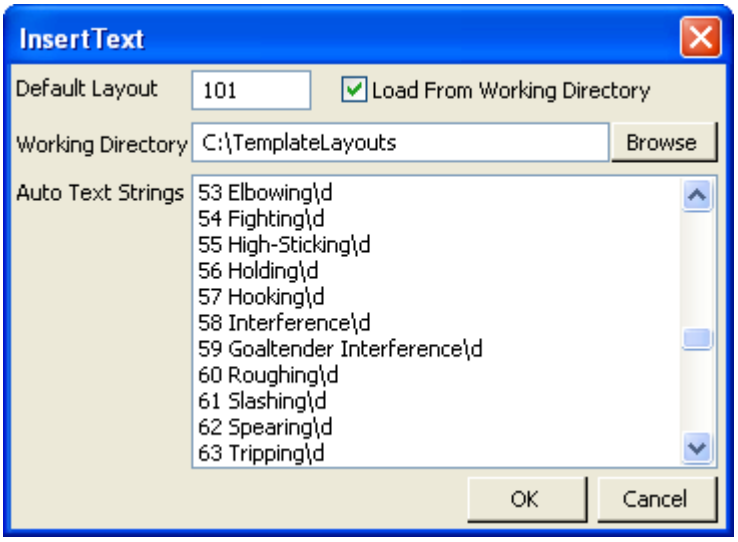


Figure 2-17. InsertText Dialog

2 Specify the directory in which to read and write layout files (.scribe files) using one of the following methods.

- Enter the path in the Working Directory field.
- Click the Browse button, and then navigate to the directory. Click OK.

3 Ensure that the Load From Working Directory checkbox is selected. Otherwise, you cannot read and write layout files in the working directory.

4 Click OK.

Example Workflow

The following sections describe a typical workflow using RapidFire.

Create a New Playlist Using Registry Templates

1 Using the number pad, enter the number of the registry item to retrieve, for example, 101.

RapidFire opens automatically. If RapidFire does not open, ensure that it is enabled on the Tools menu, Tools > RapidFire.

2 Press F2 to load the layout from the registry.

A Scratch.vii layout is automatically created and placed in the playlist. Template 101 is loaded from the registry and copied to the Scratch.vii layout.

3 Change the layout if required.

4 Using the number pad, enter a number to use as a name for the layout, for example, 213.

5 Press the RapidFire RECORD LAYOUT key (or F5 on the standard keyboard) to write the layout.

The layout in Scratch.vii is written to the playlist.

Send a Layout in the Playlist to Air

In this sample scenario, a two channel system is configured with two program channels: the first is assigned to video board 1 for previewing and the second is assigned to video board 2, which is the air channel.

1 Using the number pad, enter the number of the layout in the playlist to retrieve, for example, 213.

2 Press F4 to read the layout from the playlist.

The layout is copied to Scratch.vii, and opened for edit.

3 Ensure that the output channel for Scratch.vii is set to the channel 1, to take the layout to the preview channel. To change the output channel for the current layout to 1, press the RapidFire STRATA 1 key (or CTRL+1 on the standard keyboard).

4 After you complete any updates, press the RapidFire TAKE key (or the number pad ENTER key).

The updated layout 213 is output to the preview channel. The original layout 213 remains unchanged.

5 Press the RapidFire SWAP key (or the number pad FORWARD SLASH key [/]) to swap channels 1 and 2 and put the graphic on the air channel.

Note: On a one channel system, press the RapidFire SETUP key (or MINUS SIGN on the number pad) to preview the graphic in the Program/Preview palette, and then the RapidFire TAKE key (or the number pad ENTER key) to take the graphic to air.

Modify a Layout in the Playlist

1 Using the number pad, enter the number of the layout in the playlist to retrieve, for example, 213.

2 Press F4 to read the layout from the playlist.

The layout is copied to Scratch.vii, and opened for edit.

3 When the updates are complete, ensure that the RapidFire text field contains the number of the layout you are editing, for example, 213.

4 Press the RapidFire RECORD LAYOUT key (or F5 on the standard keyboard) to update the original layout with your changes.

Modify a Registry Template

Note: You cannot create new registry entries using RapidFire.

1 Using the number pad, enter the number of the registry item to retrieve, for example, 101.

2 Press F2 to load the layout from the registry.

3 Edit the layout.

4 When the updates are complete, ensure that the RapidFire text field contains the number of the template you are editing, for example, 101.

5 Press F3 to update the registry template with your changes.

Create a New Layout Using a Layout in the Working Directory

1 Ensure that the Load From Working Directory option is selected in the RapidFire menu. See Figure 2-17 on page 64.
(If the RapidFire dialog is undocked, click its Config button and then ensure that the Load From Working Directory checkbox is selected in the InsertText dialog.)

2 In the RapidFire text field, enter the filename of the layout (without the .scribe file extension) to load from the working directory, for example, layout1.

3 Press SHIFT+F4 to load the layout from the working directory.

The layout is copied to Scratch.vii, and opened for edit.

4 Change the layout if required.

5 Using the number pad, enter a number to use as a name for the layout, for example, 214.

6 Press the RapidFire RECORD LAYOUT key (or F5 on the standard keyboard) to write the layout.

The layout in Scratch.vii is written to the playlist.

Write a Layout to the Working Directory

1 Create a layout.

2 Ensure that the Load From Working Directory option is selected in the RapidFire menu. See Figure 2-17 on page 64.
(If the RapidFire dialog is undocked, click its Config button and then ensure that the Load From Working Directory checkbox is selected in the InsertText dialog.)

3 Using the number pad, enter a filename for the layout, for example, layout1.

4 Press SHIFT+RECORD LAYOUT on the RapidFire keyboard (or SHIFT+F5 on the standard keyboard) to write the layout to the working directory.

The layout in Scratch.vii is written as a layout (.scribe file) in the working directory. For information on controlling the directory in which layout files are created, see "Set the Working Directory" on page 64.

Create a New Layout Using a Media Store Template

Feature Note Media Store is a purchase option in TitleOne.

1 Ensure that the Load From Working Directory option is not selected in the RapidFire menu. See Figure 2-17 on page 64.
(If the RapidFire dialog is undocked, click its Config button and then ensure that the Load From Working Directory checkbox is cleared in the InsertText dialog.)

2 Using the number pad, enter the media number of the Media Store template layout to retrieve, for example, 1001.

Note: Media Store displays a T icon in the top right corner of template layout thumbnails.

3 Press SHIFT+F4 to load the template layout from Media Store.

The layout is copied to Scratch.vii, and opened for edit.

4 Change the layout if required.

5 Using the number pad, enter a number to use as a name for the layout, for example, 214.

6 Press the RapidFire RECORD LAYOUT key (or F5 on the standard keyboard) to write the layout.

The layout in Scratch.vii is written to the playlist.

Write a Layout to Media Store as a Template

Feature Note Media Store is a purchase option in TitleOne.

1 Create a layout.

2 Ensure that the Load From Working Directory option is not selected in the RapidFire menu. See Figure 2-17 on page 64.
(If the RapidFire dialog is undocked, click its Config button and then ensure that the Load From Working Directory checkbox is cleared in the InsertText dialog.)

3 Using the number pad, enter a number to use as the media number for the template in Media Store, for example, 2001.

4 Press SHIFT+RECORD LAYOUT on the RapidFire keyboard (or SHIFT+F5 on the standard keyboard) to write the layout to Media Store.

The layout in Scratch.vii is written as a layout (.scribe file) in the working directory. For information on controlling the directory in which layout files are created, see "Set the Working Directory" on page 64.

Update a Layout with Auto Text

Use the Auto Text feature to update your layout with commonly used text from a text file. The text file contains text entries and determines where the cursor moves after you insert the string.

Create an Auto Text File

Use the following instructions to create a text file to use with the Auto Text feature.

1 Open a text editor such as Notepad or Wordpad.

If you purchased the RapidFire Keyboard option, press CTRL+ALT+AUTO TEXT to launch a text editor.

2 Create a text file where each line has the following format.

[Number][TAB][Text][Modifier][CR]

For example, a text entry looks like:

53 Hooking\d

- [Number] is any number. Each number in the file must be unique.
- [TAB] is the tab character.
- [Text] is a single line of text.
- [Modifier] is one of the text modifiers listed in the following table.

  You can enter text modifiers anywhere in the line of text, including the beginning and end.
- [CR] is a carriage return.

Table 2-4. Modifier Descriptions

Modifier	Description
\t	Enters a tab character

Table 2-4. Modifier Descriptions

Modifier	Description
\n	Enters a carriage return
\u	Presses the UP ARROW key
\d	Presses the DOWN ARROW key
\\	Inserts a backslash (\) character

3 Save the file as a text (.txt) file with the same filename as the associated playlist (.scribelist) file. You must save the text file in the same folder as the associated playlist.

Note: If you launched the text editor using the RapidFire Keyboard CTRL+ALT+AUTO TEXT shortcut key, the file is automatically saved correctly.

Insert a Text String from the Auto Text File

To insert a text string from the Auto Text file associated with your playlist:

1 Place your cursor in the text line of your CG layout where you want to insert the text.

2 In RapidFire, use the number pad to enter the number of the text string to insert.

To view the Auto Text strings available for the playlist, perform one of the following actions.

- Press SHIFT+AUTO TEXT using the RapidFire keyboard.
- Click Config in the RapidFire dialog.

The InsertText dialog lists the Auto Text strings.

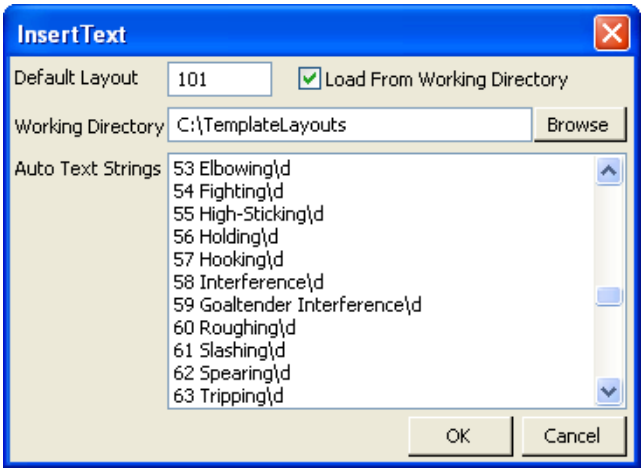


Figure 2-18. List of Available Auto Text Strings

3 Insert the Auto Text using one of the following methods.

- Press the RapidFire AUTO TEXT key.
- Click Auto Text in the RapidFire dialog.

The specified Auto Text string is inserted at the cursor position in the text line of your CG layout. If the Auto Text string ends in \n, the cursor drops to a new text line directly below the current line.

RapidFire Keyboard Option

If you purchased the RapidFire Keyboard option for TitleOne, you received the custom RapidFire keyboard designed for sports and live event coverage. For information on the RapidFire keyboard, see "RapidFire Keyboard" on page 532.

Set Default Template

The default template loads when you clear the Scratch.vii layout.

1 Open the InsertText dialog using one of the following methods.

- Press SHIFT+AUTO TEXT using the RapidFire keyboard.
- Click Config in the RapidFire dialog.

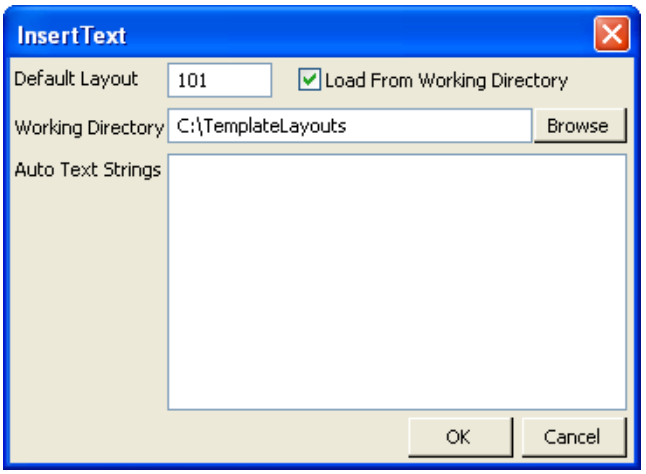


Figure 2-19. InsertText Dialog

2 In the Default Layout field, enter the number of the default template.

3 Click OK.

Overlay

Overlay enables real-time layering of CG objects, independent of content displayed in CG or the playlist. Overlay allows clocks, timers, crawl tickers, station IDs, and logos to display on one of three independent output layers. You can control the display of objects manually in Overlay while any other event sequence is running.

Use Overlay

The Overlay application controls the output and display of clocks, logos, and other layouts independent of other event sequences running in TitleOne.

The following steps outline the basic Overlay workflow.

1 Create your clock, crawl, logo, or other layout in CG.

2 Export the layout as a .scribe file (File > Export > Export SCRIBE File).

3 Open Overlay (Tools > Overlay).

4 Click the line beside the I button.

5 Click the Setup button.

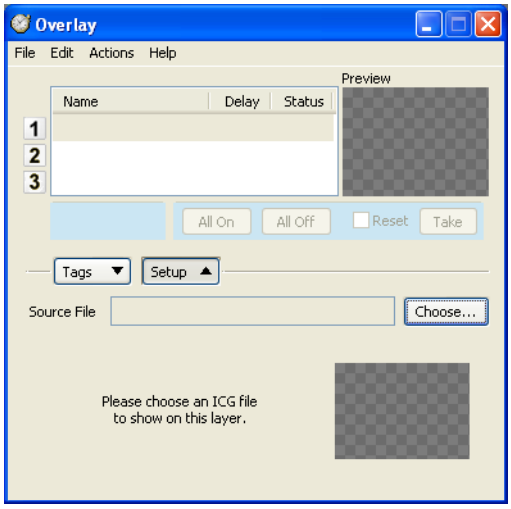


Figure 2-20. Click the Setup Button to View Open Options

6 Click Choose and open the .scribe file. The file loads in Overlay.

7 Click on the numbered button beside the item, so it turns yellow.

8 Click the Take button. Overlay displays the layout on the program channel.

Set Up Items in Overlay

In Overlay you can open your CG items, updated tagged text lines, add and remove items, and save and load sets of items. The following topics describe these features in detail.

Tag Layout Text for Updates

In the CG module of your TitleOne product, you can label your text objects using tags. Once you label a text object with a tag you can change the tagged text in Overlay.

Tagged text is useful for immediate updates. For example if you tag a text area in the layout for displaying a game score, you could easily change the score in Overlay before you air the layout.

1 To tag text in CG, select the text line in your layout.

2 Click the News Edit button.

Figure 2-21. News Edit Button

3 In the News Edit dialog, TitleOne automatically labels the text with the place holder text. To change the label name, enter a name for the tag in the Tags field and click Add.

The text line in your layout is labeled with the tag name.

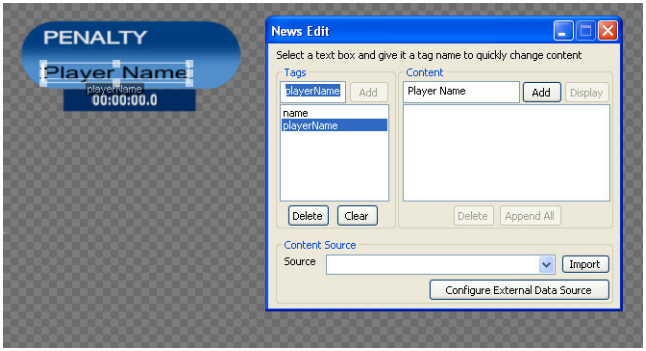


Figure 2-22. Add Tags to CG Layout

4 Click the X button to close the dialog.

Note: Even if the label disappears in the CG workspace, the tag is still added to the text line.

5 Save the layout as a .scribe file (File > Export > Export SCRIBE File).

6 Open Overlay (Tools > Overlay).

7 Click on the line beside the I label.

8 Click the Setup button.

9 Click Choose and open the .scribe file. The file loads in Overlay.

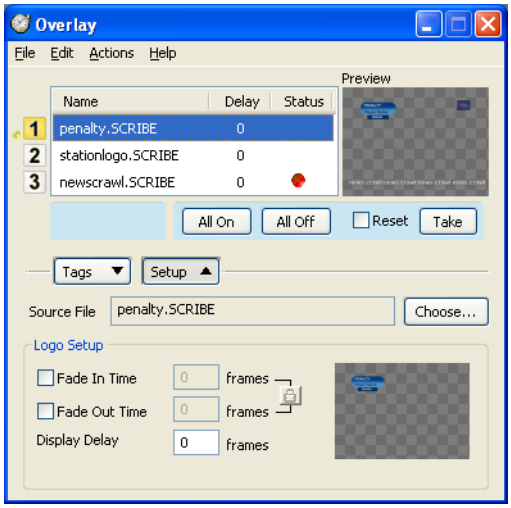


Figure 2-23. Three Files Loaded in Overlay

Update Tagged Text in Overlay

After you open the .scribe file containing the tagged text, you can update the text in Overlay for quick updates.

1 Select the tagged item from the Items list in Overlay.

2 Click the Tags button to display the tagged text fields.

3 Update the text beside the tag label. When you change the text, the line turns yellow, indicating the update.

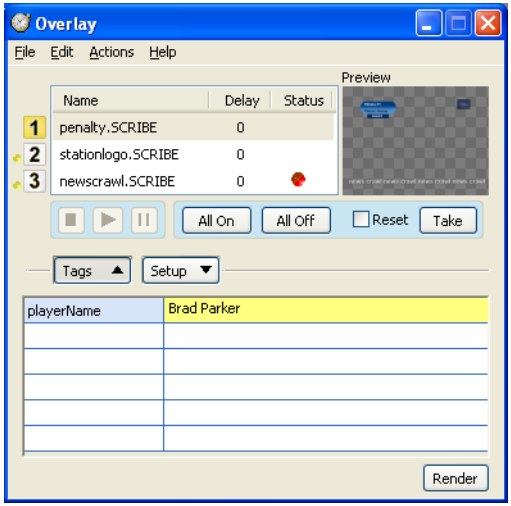


Figure 2-24. Update Tagged Lines in Overlay

4 Click the Render button to update the text. The yellow line returns to white, indicating the updates are complete.

Add/Remove Items

The Overlay application loads and outputs CG objects saved as .scribe files. The .scribe file contains information on how the layout item looks, the position of the layout item, and other formatting options.

1 After creating your objects in CG, save the layout as a .scribe file (File > Export > Export SCRIBE File).

If you are saving an animation layout, save the layout in the Animation Editor as a .via file (File > Import/Export Animation).

2 Open Overlay (Tools > Overlay).

3 Select the line beside the 1 button label.

4 Click the Setup button.

5 Click Choose and open the .scribe file. The file loads in Overlay.

6 Select the line beside the 2 button label.

7 Click Choose and open the .scribe file. You can open up to three .scribe files at one time.

The preview window displays all opened .scribe files in order from top (top of the list) to bottom (bottom of the list). The top layout overlaps any layouts below. You can change the top to bottom order by selecting an item and dragging it up or down in the list.

8 To replace an item with another .scribe file, select the item you want to replace from the list, click the Choose button, and then select the new file in the Open dialog.

9 To remove an item from Overlay, select the file from the list and then click the Delete key on your keyboard.

Save a Set of Items

Once you have multiple layouts opened in Overlay, you can save the list of items as a single .overlay file. Saving the list allows you to group related files together. When you open the .overlay file, all the .scribe files open in Overlay.

1 Add your three items to Overlay by selecting a line, clicking the Setup button, and then choosing a file.

2 To save the list of items as one file, select File > Save Set and save the list in the Save As dialog.

Load a Set of Items

After you save a set of items in Overlay, you can load the .overlay file for output.

1 To load a list of items, select File > Load Set.

2 Open the .overlay file in Open dialog.

Prepare Items for Output

You can use the options in Overlay to delay the output of an item, advance or delay the clock time, fade items on/off, and loop crawl or animation items.

Fade Item On/Off

Use the Fade options to fade an item on and off screen. By default items cut on and off.

1 Select an item from the list.

2 Click the Setup button to expand the setup options.

3 To fade the item on screen, check the Fade In checkbox.

4 Enter the duration of the fade in frames.

5 To fade the item off screen, check the Fade Out checkbox.

6 Enter the duration of the fade in frames.

7 If you want the duration of the fade out to equal the duration of the fade in, select the Lock button. When you select the Lock button, the fade values remain equal.

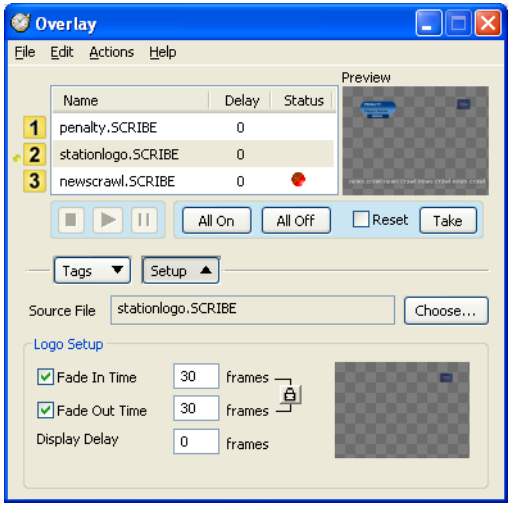


Figure 2-25. Fade Item On/Off Screen

Delay On-Air Display

You can delay the on-air display of any item in the item list. Overlay delays the display by the set number of frames.

1 To delay the on air display of an item, select the item in the item list.

2 Click the Setup button to expand the setup options.

3 Enter the number of frames that you want to delay the item in the Display Delay field.

Loop a Crawl/Animation

Crawl and animation items include a loop option that loops the item continuously.

1 Select the crawl or animation item from the list.

2 Click the Setup button to view the setup options.

3 To loop the crawl or animation continuously, check the Continuous Loop checkbox.

Overlay Output Options

Overlay includes a number of options for playing your events. The following table describes the output options available in Overlay.

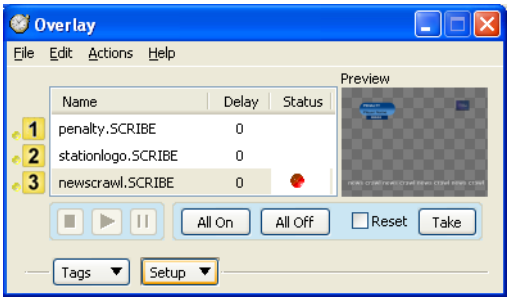


Figure 2-26. Output Options in Overlay

Table 2-5. Overlay Output Options

Output Option	Description
Numbered buttons	Sets the show/hide state of the item. A white number marks an item set to hide on the program channel. A yellow number marks an item set to display on the program channel.
Flashing Indicator	Indicates the item's show/hide state has changed. The indicator stops flashing the next time you take the item.

Table 2-5. Overlay Output Options

Output Option	Description
Take button	Applies any changes to the show/hide state. If you set an item to display, clicking Take displays the item on the program channel. If you set an item to hide, clicking Take hides the item on the program channel. When you take a timer that is set to display, the timer plays on the program channel at its last running state. • If the timer was not running, clicking Take displays the timer at the first frame. The timer does not start running until you click the Play button. • If the timer was already running and you hid the timer, clicking Take displays the running timer.
Status Indicators	Displays the on-air status of the item. If the item is running, the status light turns green. If the item is not running, the status light is red.
All On button	Displays all of the items in Overlay on the program channel.
All Off button	Hides all of the items on the program channel.
Reset checkbox	Resets all of the items on the program channel to the first frame after you click Take. Each item resets to the first frame and resumes playback.

Output Items

You can easily output items in Overlay using the output options. This topic describes the output options for all items except timers. For information on playing timers, see "Output Timers" on page 82.

1 Click on the numbered button beside the item to show or hide the item during output.

- A white number marks items hidden during output.
- A yellow number marks items displayed during output.

A flashing indicator beside the number indicates the item's show/hide state has changed. The indicator stops flashing the next time you take the item.

2 Click the Take button. The Take button applies any changes to the show/hide state.

- If you set an item to display in step one, clicking Take displays the item on the program channel.
- If you set an item to hide in step one, clicking Take hides the item on the program channel.

The status indicators change when you take an item. If the item is running, the status light turns green. If the item is not running, the status light is red.

3 To quickly display all the items on the program channel, click the All On button. To quickly hide all the items on the program channel, click the All Off button.

4 To reset the items on the program channel to the first frame, check the Reset checkbox and then click the Take button. Each item resets to the first frame and resumes playback.

Output Timers

You can easily output times in Overlay using the output options and run buttons. This topic describes the output options for timers only. For information on playing other items, see "Output Items" on page 81.

1 Click on the numbered button beside the timer so it is yellow. A yellow number marks items that display during output.

A flashing indicator beside the number indicates the item's show/hide state has changed. The indicator stops flashing the next time you take the item.

2 Click the Take button. The Take button applies any changes to the show/hide state.

- Since you set the timer to display in step one, clicking Take displays the timer on the program channel. The timer displays at the first frame, but doesn't start counting until you click Play.

- If you had set the timer to hide in step one, clicking Take would hide the item on the program channel.

3 Click the Play button to start the timer counting-up or counting-down.

4 Click the numbered button beside the timer to hide the item, and then click Take. Overlay hides the timer.

5 Click the numbered button again and then click Take. Overlay displays the timer. The timer is still running.

6 Click the Pause button to pause the timer.

7 Click Play to resume the timer.

8 Click Stop to stop the timer from counting and to reset the timer to the first frame.

Strata Configuration Utility

Using the Strata Configuration Utility option, you can set up virtual channels, which appear as separate output channels in TitleOne. You assign the virtual channels to layers on your output. This enables real-time compositing of up to five virtual channels into a single physical channel. Use Strata to schedule and play events independently on separate layers at the same time.

Feature Note The Strata Configuration Utility is a purchase option in TitleOne.

Output Using Strata

Strata is a utility that controls the output and display of your Inscriber applications. Using Strata, you can easily assign any of G-Scribe, G-Store, TitleOne, Automation Interface, and Overlay to layers on one or two channels. Events can be scheduled and played independently on separate layers without interfering with each other.

Strata automatically detects your Strata-enabled applications and the number of boards on your system.

When Strata is installed on your system, you can assign your applications to virtual output channels, and assign virtual channels to layers on your video board output.

1 Open the Strata Utility by double-clicking the Strata icon on your desktop.

  The utility will look different depending on how your system is configured.

2 On a two channel system, you can assign one board to be a preview channel and the other a program channel, or both to be program channels.

3 Assign your Strata-enabled applications to video boards.

  The application instances correspond to the virtual output channels available in your application. For example, if you set up three TitleOne application instances in the Strata Utility, three output channels are available in the TitleOne application. For some applications, such as Overlay, only one instance is available.

  You can assign multiple instances to the same video board and assign instances to both video boards (on a two channel system).

4 Arrange the layers for each video board.

Note: In a configuration of five layers, layer one is the top-most layer and layer five is the background layer.

5 If you designated a video board for previewing (on a two channel system) or have a USB adapter that provides an external video head, select which applications can use it for previewing.

6 Click the Finish button to save your configuration.

7 Create your layouts.

8 If you set up multiple application instances in Strata, assign events to channels. Output channels in your application correspond to application instances in Strata. For example, output channel I in your application corresponds to application instance I.

- In the TitleOne Sequencer module, select a channel by clicking a Program button on the Event Editor tab.

Figure 2-27. Program Buttons on the Event Editor Tab

- In the TitleOne CG module, select an event in the playlist and select a channel in the Program/Preview palette.
- In Automation Interface, the available channels are listed for each event. If the layers are listed by letters, 'A' corresponds to layer one, 'B' corresponds to layer two, and so on.

9 Output your layouts. Output displays on the corresponding layers of the assigned video boards.

a Click the Online toggle button on the toolbar to go online. When the button is selected, you are online.

b On the Run tab in Sequencer, click the Run Job button to run your job from the selected event.

c Use the SPACEBAR to trigger the next event.

d To stop output, click the Stop button on the Run tab.

Use Strata to Configure Output

The following sections describe how to use the Strata Utility to configure your output.

Welcome Screen

The Welcome screen provides an overview of the Strata Utility.

1 Read the overview.

2 Click the Next button.

Detect Installs Screen

Strata automatically detects your Strata-enabled applications and the video boards on your system.

1 In the Applications Detected area, verify that all your applications are listed.

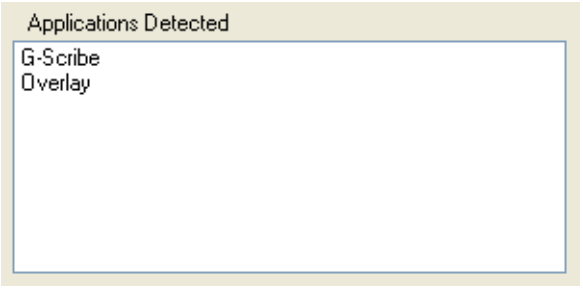


Figure 2-28. Detected Applications

If an application is not listed, refer to your manual for tips on troubleshooting.

2 In the Outputs area, verify that all your broadcast-quality video boards are listed.

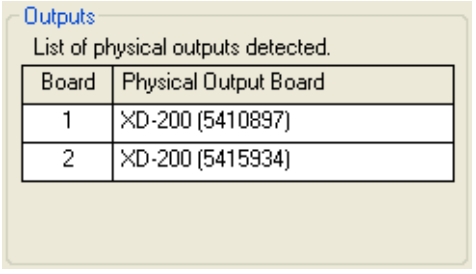


Figure 2-29. Detected Video Boards

3 In the Designate Audio area, select the audio board to use for audio output (if your system has an audio board).

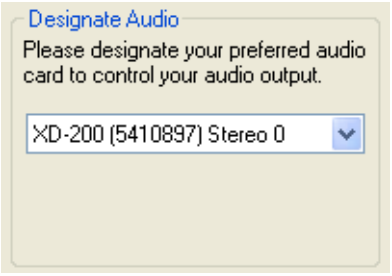


Figure 2-30. Designate Audio Card

4 Click the Next button.

Assign Outputs Screen

Two Channel Systems Only - If your system has multiple video boards, you can use both for outputting program broadcasts, or assign one for previewing and one for outputting program broadcasts.

1 For each video board on your system, select Preview or Program to designate its use. On a two channel system, you can designate at most one preview channel.

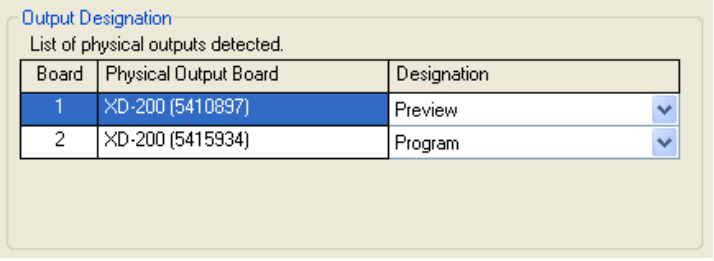


Figure 2-31. Designate Program and Preview Channels

Note: A video board designated for preview provides only still previews, and is not available for program output.

2 Click the Next button.

Note: Designated output is supported with G-Scribe and G-Store products

only. This setting has no effect on TitleOne, Overlay, or other applications.

Configure Applications

You control the number of application instances to use for each application. The application instances correspond to the output channels available in your application. For example, if you set up three TitleOne application instances in the Strata Utility, three output channels are available in the TitleOne application. For some applications, such as Overlay, only one instance is available.

1 In the Applications area, select an application in the Applications List to view the allowable application instances.

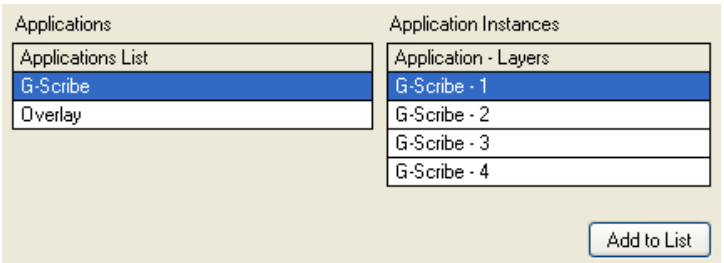


Figure 2-32. Available Application Instances

2 For each application instance to use, select the instance in the Application Instances area from the Application Layers list, and then click the Add to List button.

3 Two Channel Systems Only - In the Applications List area, for each application instance in the Application Layer list select a board to designate the output board. (On a later screen, you will assign the application instances to layers on the video board.)

Note: Do not assign application instances to a video board designated

for previewing

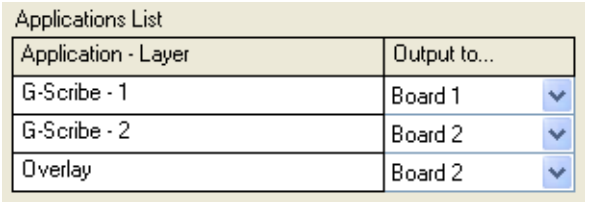


Figure 2-33. Designate Video Board for Application Instances

4 To remove an application instance, select it in the Applications List area and then click the Remove from List button.

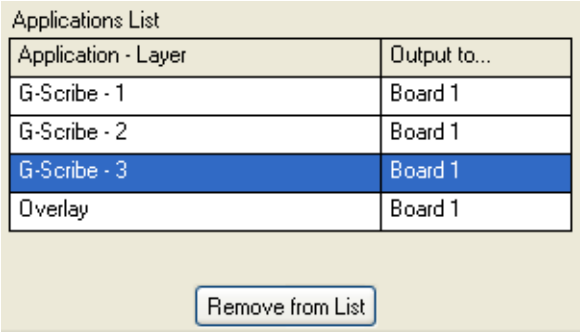


Figure 2-34. Remove Application Instances

5 Repeat steps I-4 for each Strata-enabled application.

6 Click the Next button.

Configure Channels - Program Channels Screen

Events can be scheduled and played independently on separate layers without interfering with each other.

1 In the Output Assignment area, you can review and change the video output board for your virtual channels (application instances).

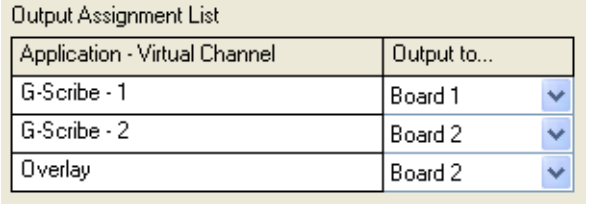


Figure 2-35. Review Video Board Assignment

2 To adjust the order of the application instance layers on your video boards, select an application instance and then click the Up or Down Arrow button.

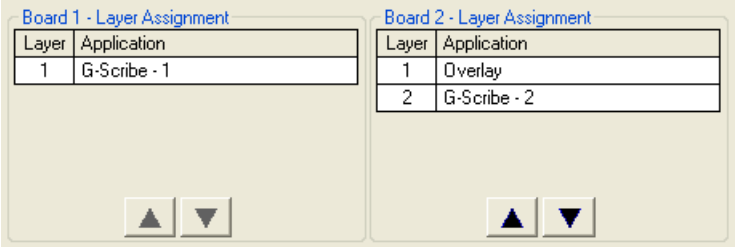


Figure 2-36. Adjust Layer Assignment

Note: In a configuration of five layers, layer one is the top-most layer and layer five is the background layer.

3 Click the Next button.

Configure Channels - Preview Channels Screen

If you designated a video board for previewing on the Assign Outputs screen (two channel systems only) or have a USB adapter that provides an external video head, you must select which applications can use it for preview.

Note: The external video head must be configured during your TitleOne installation.

l In the Applications List area, select the checkbox for each application that will use the video board/external video head for preview.

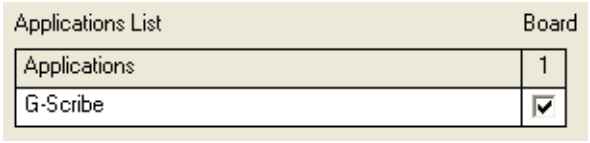


Figure 2-37. Select Applications for Preview

2 Click the Next button.

Note: The preview functionality provides only still previews.

Summary Screen

Review the Strata configuration before you close the Strata Utility and save the configuration.

l For each video board, verify the order of the layers in the Layer Assignment area.

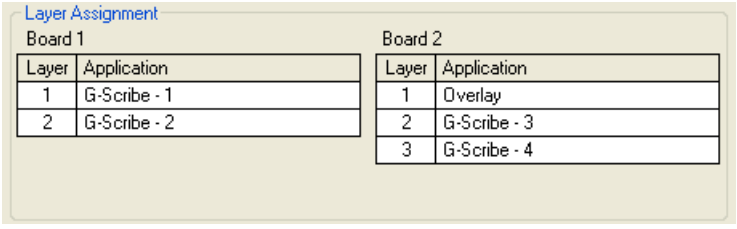


Figure 2-38. Review Layer Assignment

2 Confirm that the correct applications can use the video board/external video head designated for preview.

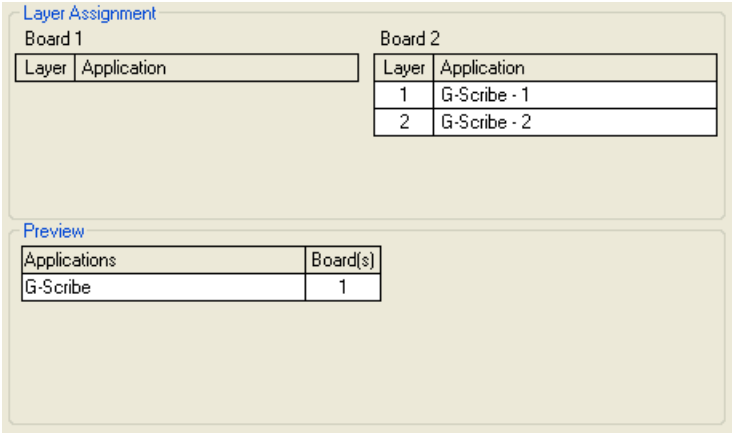


Figure 2-39. Review Applications for Preview

3 Click the Finish button.

The configuration is saved and the Strata Utility closes.

Chapter 3

CG

Create layouts with the CG module.

Introduction to CG

CG is a full-featured character generator that creates still, roll, crawl, and animation layouts for display to video. Create layouts by adding objects to the CG workspace, customizing the object attributes, and setting their position and layering. Layouts can be created from scratch or can be based on pre-made templates.

Switch to CG

Switch between modules using the buttons on the toolbar or the options on the Tools menu:

- Click the CG button in the Main toolbar.
- Select Tools > Character Gen.
- Press the F6 key.

Interface Overview

The CG workspace contains the tools for creating your CG layouts, as well as the tools for outputting your layouts and for transferring resources between layouts and between other modules.

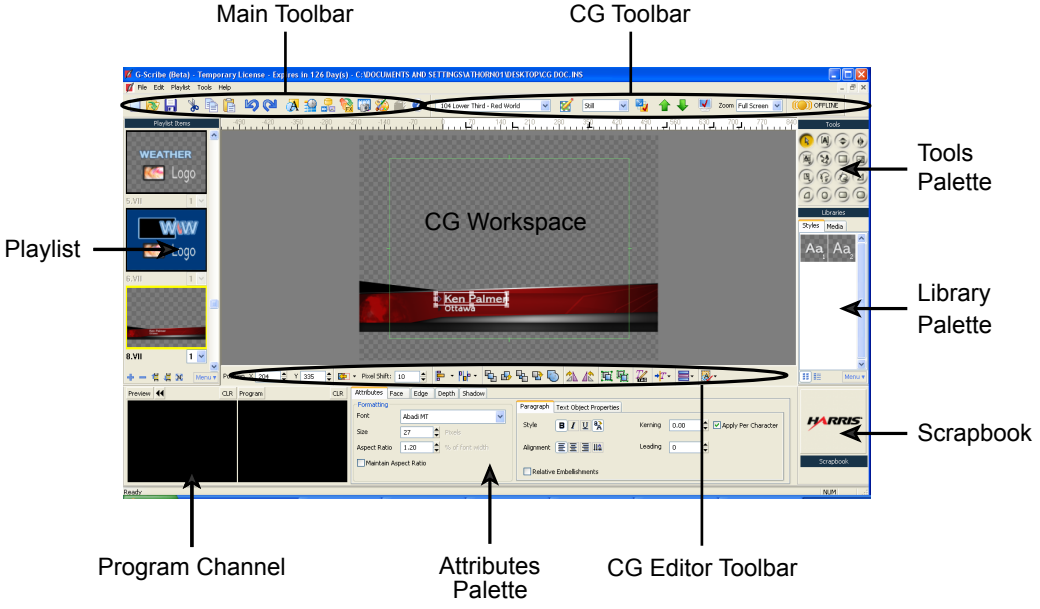


Table 3-1. The CG Workspace

Workspace Area	Description
CG Toolbar	The CG toolbar allows you to configure your layouts and your display. It also helps you navigate between the objects in the CG workspace.
CG Workspace	Create your layout by adding and positioning text, graphic, logo, clock, and Port objects in the CG workspace. You can also add a background to the layout. The workspace shows what your layout looks like as you work.
Tools Palette	Use the text, graphic, logo, clock, and Port tools from the Tools palette to draw objects in the CG workspace. The Tools palette also contains the Pointer and Selection tools, which allow you to select and transform your objects.
CG Editor Toolbar	The CG Editor toolbar contains tools to help you position, transform, and layer the objects in the CG workspace.
Attributes palette	The tabs in the Attributes palette help you change the attributes and appearance of your objects. To display the contents of a tab, click the tab name.
Library Palette	Manage your styles and media with the Library palette. The Style Library helps you maintain a consistent look for your layout objects, and the Media Library stores commonly-used images, clips, clocks, and Port objects.

The CG Workspace

Create your layout within the CG workspace. The CG workspace displays the layout as it will appear on your output, with a grey checkerboard pattern representing the video transparent areas.

Layouts are made up of layout objects which you customize and position within the CG workspace.

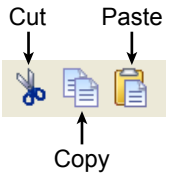
Right-Click Menus

Right-click the CG workspace to view contextual right-click menus. These menus contain useful options for configuring the workspace.

If you right-click a layout object, the menu displays options for working with that particular object.

Cut/Copy/Paste

Layout objects can be cut, copied, and pasted within the CG workspace. Use the following methods to cut, copy, and paste objects that are selected in the layout:

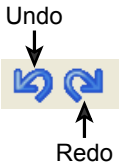


- Click the Cut, Copy, and Paste buttons in the Main Toolbar.
- Select Edit > Cut, Edit > Copy, or Edit > Paste.
- Use the standard shortcut keys CTRL+X, CTRL+C, and CTRL+V.

Objects are pasted at the center of the CG workspace.

Undo/Redo

CG contains unlimited Undo/Redo steps to help you correct mistakes. Use the following methods to undo and redo your actions:



- Click the Undo and Redo buttons in the Main Toolbar
- Select Edit > Undo or Edit > Redo.

- Right-click the CG workspace and select Undo or Redo.
- Use the standard shortcut keys CTRL+Z and CTRL+Y.

The Tools Palette

The Tools palette contains tools for adding text and graphic objects to your layout.

Some of the buttons in the palette contain multiple tools. If the tool you are looking for is not visible in the Tools palette, hold the left mouse button on the visible tool. When the flyout menu appears, click the tool you want to use.

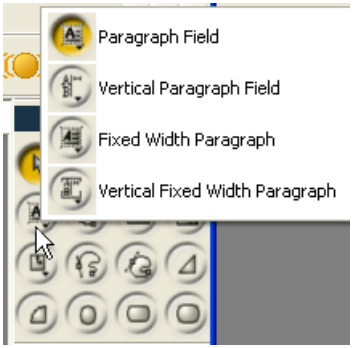


Table 3-2. Text and Graphic Tools

Icon	Name	Icon	Name
	Pointer		Round Rectangle
	Selection		Logo
	Text Field		Vertical Text Field
	Text Constrained Field		Vertical Text Constrained Field
	Paragraph Field		Vertical Paragraph Field
	Fixed-Width Paragraph Field		Vertical Fixed-Width Paragraph Field
	Text Path		Spline
	Wedge		Polygon

Table 3-2. Text and Graphic Tools (Continued)

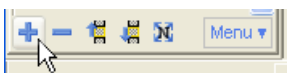
Icon	Name	Icon	Name
	Arc		Port
	Oval		Clock
	Rectangle		Horizontal Guide
	Round Corner Rectangle		Vertical Guide

In most cases, add objects to your layout by selecting a tool and either clicking in the CG workspace or drawing boundaries for the object.

Work with Layouts

A layout consists of all the components of an output screen. In CG you combine various objects to create layouts. These layouts are then output to video.

Create new layouts by pressing the Add Default Event button at the bottom of the Playlist. Your CG workspace shows the new layout.



When you launch TitleOne a default layout is already created for you.

Layout Objects

Layouts contain objects that display customized text and graphics. CG offers six basic object types for you to use in your layouts: text objects, graphic objects, logo objects, clocks, ports, and a layout background.

Create Objects

Add text and graphic objects to layouts by selecting the appropriate tool, placing the object in the layout, and defining its contents and appearance.

Logo and clip objects can also be added to your layout using the Media Library. See "The Media Library" on page 177.

Table 3-3. Layout Objects

Component	Description
Text Objects	Text objects contain the text in your layout. You can constrain a text object to keep its size constant, or allow it to grow as more text is added. Paragraph text objects can contain multiple lines of text. You can also create text paths and vertical text. You can attach data tags to text objects. Data tags allow you to quickly update objects and to attach objects to external data sources. See "Text Objects" on page 105 to learn more about text objects.
Graphic Objects	Graphic objects are shapes such as rectangles and circles. Use the graphic object tools to create simple shapes, polygons, lines, and splines for your layout. See "Graphic Objects" on page 130 to learn more about graphic objects.
Logo Objects	Logos are a special class of objects. They display imported images that can be tinted and can contain alpha transparency. See "Logo Objects" on page 137 for details on understanding and using logos in your layouts.
Clip Objects	Use clip objects to add full resolution, uncropped video clips to layouts. See "Clip Objects" on page 147 for more information.
Clocks	CG comes with pre-defined digital clocks and digital timers. See "Clock Objects" on page 141 for more information about clocks.

Table 3-3. Layout Objects (Continued)

Component	Description
Ports	You can install and use RTXports applications within CG. Port objects connect to RTXports applications, allowing you to add sophisticated RTX objects to your layouts. See "Port Objects" on page 145.
The Layout Background	The layout background is an object that cannot be edited with the Pointer or Selection tool. Backgrounds can consist of colored backgrounds, images, or video clips. See "Layout Backgrounds" on page 199 for more information.

Move Objects

Use the Selection and Pointer tools to select and move your objects. You can also group your objects, which maintains their spacing when they are moved.

To learn how to change the position, spacing, and orientation of your objects, see "Manage Objects" on page 181.

Object Appearance

Most objects consist of four different elements: a face, one or more edges, a depth, and a shadow. In most cases each element can also include a sheen. Change the attributes of the elements to customize the appearance and shape of the object.

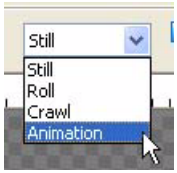
Create complex text and graphic styles by applying "treatments" to elements. You can store styles in the Style Library, and apply them to other objects in other layouts.

- To learn about object elements, see "Object Elements" on page 150.

- To learn about element treatments, see "Element Treatments" on page 157.
- To learn about the Style Library, see "The Style Library" on page 173.

Layout Types

The layout type determines how your work displays on video. You can select one of four different layout types, depending on the type of layout you are creating.



To change the layout type, select a type from the Title Type drop-down list in the CG toolbar.

Table 3-4. Layout Types

Layout Type	Description
Still	Still layouts are static screen images that contain text and graphic objects. Some common types of still layouts are lower thirds, corner logos, and full screen layouts.
Roll	Rolls scroll text and graphic objects up or down the screen. Generally, rolls are used for credit sequences. You can prevent a layout object from scrolling by clearing the Scroll with Crawl/Roll checkbox. Multiple roll layouts can be combined into a single multi-page roll. See "Create Multi-Page Rolls" on page 317 for details.
Crawl	Crawls display a running line of text, such as an announcement or a warning, across the screen. Crawls are not limited to a single line of text and can be placed anywhere on the layout. You can prevent a layout object from moving by clearing the Scroll with Crawl/Roll checkbox. Multiple crawl layouts can be combined into a single multi-page crawl. See "Create Multi-Page Crawls" on page 319 for details.

Table 3-4. Layout Types (Continued)

Layout Type	Description
Animation	Animation layouts allow you to turn a CG layout into an animation in the FX module. See "Animation" on page 247 for details.

See "Create Layouts" on page 229 for more information about layouts and layout types.

Templates

Templates allow you to save and reuse standard layouts. These layouts can be used over and over again, and are ideal for those situations where you have a basic layout with one or two elements that change frequently.

Once you have created a standard layout you can save it as a template. The next time you need to use the layout, select the template from the Templates drop-down list in the CG toolbar, make any necessary changes, and save the modified layout.

Templates include anything you put in a layout, from a simple lower third definition to a complex layout full of logos and other graphic objects. See "Templates" on page 231 for details.

Display Options

Use CG markers and guidelines to help place your text and graphic objects. The Display Options menu shows or hides guides and markers in the CG workspace.

Guides and markers do not appear when layouts are output.

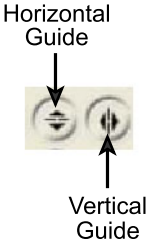
1. Click the Display Options button on the CG toolbar. The Display Options menu appears.
2. Select a menu option to show a marker or guideline.
3. Clear a menu option to hide a marker or guideline.

You can also show, hide, and modify layout markers by right-clicking on the CG workspace and selecting an option from the right-click menu.

Guides

Horizontal and vertical guides help you position your layout objects. Select the Display Options > Show All Guides option to display the guides in the CG workspace.

To add a horizontal guide to your layout, select the Horizontal Guide tool in the Tools palette and click the CG workspace. A horizontal guide is created.



To add a vertical guide select the Vertical Guide tool and click the CG workspace.

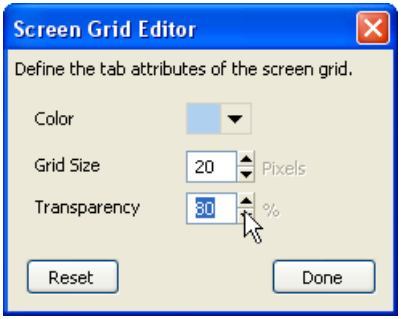
If the Snap to Guides option is checked in the Display Options menu, objects in your layout snap to the horizontal and vertical guides when the objects are moved.

You can move a guide by selecting it with the Pointer or Selection tool and dragging it to another location. To delete a guide, select it and press the DELETE key.

Screen Grid

The screen grid allows you to snap objects to the grid for easier alignment. Select the Display Options > Screen Grid option to display the grid in the CG workspace. The grid does not appear on your layout output.

To change the color, size, and transparency of the screen grid, select Display Options > Edit Screen Grid. The Screen Grid Editor sets the size and appearance of the grid. Click the Reset button to use the default settings.



If the Snap to Grid option is checked in the Display Options menu, objects in your layout snap to the grid when they are moved.

Video Safe Title Area

The video safe title area consists of 80% of the output screen, measured from the center of the screen outward in all directions. The video safe marker provides a guideline for placing text and graphic objects.

To display the video safe title area, select the Display Options > Show 4:3 Title Safe Area. If you are working on a 16:9 layout you can choose to display either a 4:3 or a 16:9 video safe title area.

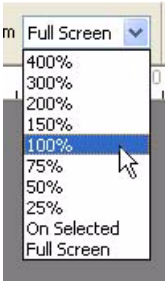
If the Snap to Title Safe Area option is checked in the Display Options menu, objects in your layout will to the video safe title area when they are moved.

Select Display Options > Edit Video Safe Area to change the size and color of the video safe title area. See "The Video Safe Title Area" on page 239.

Adjust Workspace Zoom

Zoom your layout display in or out to help you edit and position objects in your CG workspace.

Select a zoom level from the Zoom drop-down list in the CG toolbar.



- Select a value from 25% to 400% to zoom your layout display in or out.
- To zoom in so that your selected object fills the visible CG workspace area, select the On Selected option.
- To zoom so that your layout fills the entire visible CG workspace area, select the Full Screen option.
- Select 100% to return your layout to the normal zoom level.

Drag the scrollbars on the edges of the CG workspace to view layout areas that are off the edge of the workspace.

Move Workspace Elements

To move a toolbar or palette to a new position, click the edge of the workspace element and drag it to a new position in the workspace. Drag elements back to their original locations to snap them back into place.

Text Objects

CG offers a variety of text objects suited to specific needs in your layouts. Text objects can be constrained to keep their lengths constant and they can contain multiple lines of text. You can also create text paths and vertical text.

Create Text Objects

Use the appropriate text tool from the Tools palette to add a text object to a layout.

Table 3-5. Text Object Tools

Icon	Tool	Description
	Text Field	For single lines of text. The field expands as text is entered. Pressing ENTER creates a new Text Field.
	Text Constrained Field	For single lines of text. The field's width is constrained and the text gets smaller to fit the field. Pressing ENTER creates a new Text Constrained Field.
	Paragraph Field	For multiple lines of text. The field expands as text is entered. Pressing ENTER creates a new line within the field.
	Fixed-Width Paragraph Field	For multiple lines of text. The field's width is constrained and the text gets smaller to fit the field. Pressing ENTER creates a new line within the field.
	Text Path	For single lines of text on a complex path. See "Text Path Objects" on page 111 for more information.

Table 3-5. Text Object Tools (Continued)

Icon	Tool	Description
	Vertical Text	For vertical text fields containing characters that are stacked on top of each other. See "Vertical Text Objects" on page 112 for more information about vertical text.

To create a new text object in a layout:

1 Select the appropriate text tool from the Tools palette.

2 Use the tool to add a text object to the CG workspace.

- When using an unconstrained text tool (like the Text Field or Paragraph Field tool) click the CG workspace to create the text object.
- When using a constrained text tool (like the Text Constrained Field or Fixed-Width Paragraph Field) click and drag in the CG workspace to place the text object and define its length.

The new text object is added to the layout. The object contains a blinking text cursor.

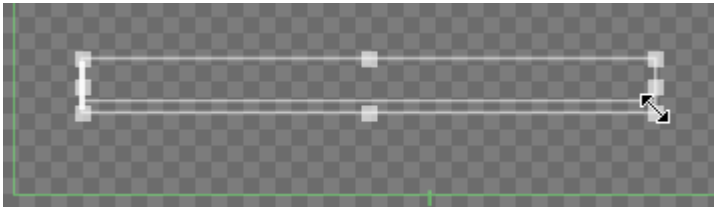


Figure 3-1. A New Text Constrained Field

Edit Text Objects

Use the Selection tool to edit the text inside text objects.

1 Select the Selection tool in the Tools palette.

2 Click a text object to place a text cursor inside.

If the object already contains text you can select a range of text by holding down the CTRL key and dragging over the text.

3 Enter your text. The way the object handles text depends on whether it is constrained or unconstrained.

- If the text object is unconstrained, it expands to the right to fit your text.
- If the text object is constrained, the text gets smaller to fit within the object.

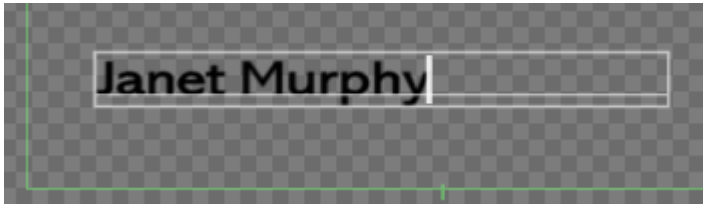


Figure 3-2. Add Text to a Constrained Text Field

Pressing ENTER while editing a paragraph text object (like a Paragraph Field or a Fixed-Width Paragraph Field object) adds a new line to the text object.

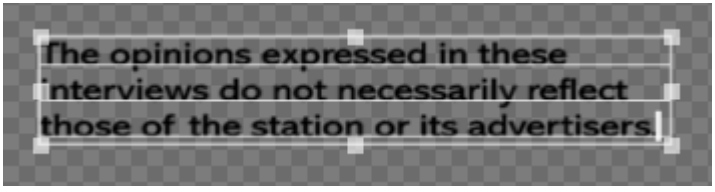


Figure 3-3. Add Lines to a Fixed-Width Paragraph Field

Pressing ENTER while editing a single-line text object (like a Text Field or a Text Constrained Field object) creates a new text object below the one being edited.

Figure 3-4. Add a New Single-Line Text Object

Change the Selection/Edit Mode

There are two modes you can use when working with text objects: Selection Mode and Edit Mode. Press the SPACEBAR and ESC keys to switch between the two modes.

- When you select a text object with the Pointer tool you are automatically placed in Selection Mode. In Selection Mode the entire object is selected. This is useful if you want to move, rotate, or change the attributes of the entire object. Press the SPACEBAR to switch to Edit Mode.

- When you select a text object with the Selection tool you are automatically placed in Edit Mode. In Edit Mode a text cursor is placed within the text object, allowing you to select and edit the text inside the object. Press the ESC key to switch to Selection Mode.

Insert Media into Text Objects

It can be useful to insert logos and video clips into text objects. Inserted media adopt the style and size of the object text and they stay within the text as the object is moved.

Feature Note You can use video clips only if you have the Clip option enabled on your system.

1 Select the Selection tool in the Tools palette.

You must use the Selection tool to insert media into text objects. If you use the Pointer tool instead, the media is applied to the face of the text object. See "Image Treatment" on page 161 to learn about adding a logo to the face of an object, and see "Active Texture Treatment" on page 164 to learn about adding a video clip to the face of an object.

2 Select the text object you want to insert the media into. A blinking text cursor appears inside the object

3 Switch to the Media tab of the CG Libraries palette.

If the media you want to use is not already stored in one of the library boxes, see "The Media Library" on page 177 to learn how to add media to the Media Library.

4 Grab the media box containing your media and drag it to the text object.

5 Drop the media in the object. The media appears at the beginning of the first line of text, with the blinking text cursor after it.

Figure 3-5. Insert a Logo into a Text Object

To quickly move the media to another location in your text object:

1 Hold the SHIFT key and press the LEFT ARROW. Your media is selected.

2 Press CTRL+X to cut the media.

3 Move your text cursor to where you want to insert the media.

4 Press CTRL+V to paste the media. The media remains in the Windows clipboard so you can continue to paste the media into other text objects if necessary.

Character Map

The Character Map helps you copy and paste special characters into your text objects. It is also a reference for the keystroke codes that reproduce special characters on your keyboard's number pad.

Choose Tools > Character Map to open the Character Map window. The window displays all of the characters available for your current font.

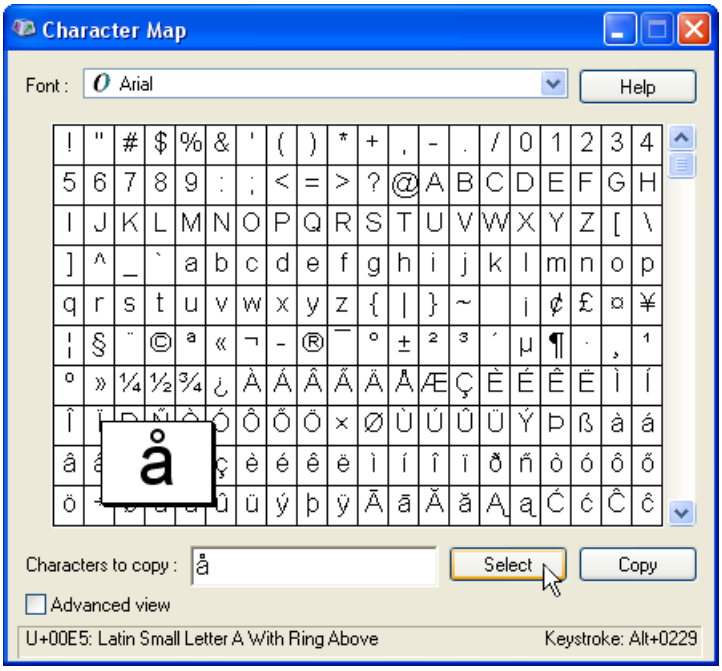


Figure 3-6. Character Map Window

Single-click on a character to see a larger image of it. The Keystroke information displayed in the window's status bar tells you how to enter that character directly with the keyboard's numeric keypad.

For instance, if the Keystroke information is **Alt+0229**, hold down the ALT key and type **0229** on the numeric keypad to type that character when you are in the CG module.

Copy Characters

When you double-click a character in the Character Map window it is added to the Characters to Copy field. Click the Copy button to copy the characters to the clipboard.

To add the copied characters to a text object, position your text cursor within the object in the CG workspace and press CTRL+V. The characters are copied from the clipboard into the text object.

Advanced View

Check the Advanced View checkbox to view different character sets, change the way the characters are grouped, and search for characters by name or by Unicode value.

Text Path Objects

Use the Text Path tool to place text along a complex spline path.

1 Select the Text Path tool in the Tools palette.

2 Click the CG workspace to place the first point of the text path.

Figure 3-7. Place the First Point of a Text Path

3 Click the CG workspace to place the rest of your points. The spline is drawn in your workspace and a text cursor appears at the end of the spline.

Hold the SHIFT key while clicking to make your point part of a curve instead of a straight line.

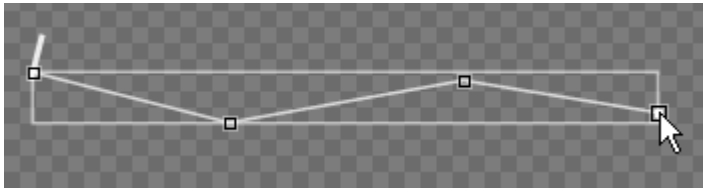


Figure 3-8. Add Points to a Text Path

4 Edit the spline path's points as necessary.

- To move one of your points, position the Text Path tool or the

Selection tool over the point until it becomes an arrow, then drag the point to a new position.

- To delete a point, position the Text Path tool or the Selection tool over the point until it becomes an arrow, then double-click the point.
- To change the curvature of a point, position the Text Path tool or the Selection tool over the point until it becomes an arrow, then hold the ALT key and drag the point's control handles. This creates convex and concave curves on either side of the point.

  You can continue to select and move the control points as long as you hold the ALT key.

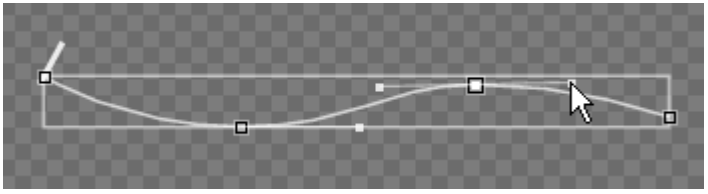


Figure 3-9. Edit a Text Path's Control Points

5 Enter your text on the spline path.

Figure 3-10. Add Text to a Text Path

Vertical Text Objects

Vertical text objects are used mainly for double byte languages such as Chinese, Japanese, and Korean, but they can be used with any language and any font. They allow you to enter characters from top to bottom and left to right on a layout.

To add a vertical text object to your layout use the appropriate vertical text

tool from the Tools palette.

Table 3-6. Vertical Text Object Tools

Icon	Tool	Description
	Vertical Text Field	For single lines of text. The field expands as text is entered, with the text itself remaining a fixed size. Pressing ENTER creates a new Vertical Text Field.
	Vertical Text Constrained Field	For single lines of text. The field's height is constrained and the text gets smaller to fit the field. Pressing ENTER creates a new Vertical Text Constrained Field.
	Vertical Paragraph Field	For multiple lines of text. The field expands as text is entered. Pressing ENTER creates a new line within the field.
	Vertical Fixed-Width Paragraph Field	For multiple lines of text. The field's height is constrained and the text gets smaller to fit the field. Pressing ENTER creates a new line within the field.

You can toggle your text objects between horizontal and vertical text:

1 Select a horizontal text object.

2 Switch to the Attributes tab in the Attributes palette.

3 In the Paragraph section of the Attributes tab, click the Vertical Orientation button. The horizontal text object changes to a vertical text object.

4 To switch vertical text to horizontal text, click the Horizontal Orientation button in the Paragraph section of the Attributes tab.

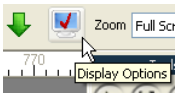
You can also toggle the orientation of text objects by right-clicking them

and choosing Vertical Text Orientation or Horizontal Text Orientation from the right-click menu.

View the Text Baseline

You can choose to show or hide the text baseline for selected text objects. The letters in most fonts sit directly on the baseline, and the descenders extend below the baseline.

To show or hide the text baseline, click the Display Options button and select or clear the Text Baseline option.



Text Object Attributes

Use the controls in the Attributes tab to change text options such as font style, rotation, text size, alignment, and spacing. You can also customize the way your object behaves when text is added to it and what happens when ENTER and TAB are pressed.

The Attributes tab contains a Paragraph tab and a Text Object Properties tab. Click either tab to display its options.

Text Font

A font is a complete set of type in a particular face. The face is the design of the font. Some fonts contain standard alphanumeric characters, while other fonts contain only special symbols.

The fonts on your system are available for all Windows applications and they are specific to each computer. If you work on multiple computers you need to be sure that the same fonts are installed on each one.

To change the font for your text objects:

1 Select a text object.

To select only some of the text in your object, select the Selection tool in the Tools palette, hold the CTRL key, and drag your cursor over the text you want to select.

2 Switch to the Attributes tab of the Attributes palette.

3 In the Formatting section of the tab, open the Font drop-down list. The fonts that are installed on your system are displayed in the list.

4 Select the font you want to use. Your selected text changes to the new font.

Figure 3-11. Change a Text Object's Font

5 Click the Style buttons in the Paragraph section of the Attributes tab to apply different font styles to your text.

Table 3-7. Font Styles

Button	Description
	Click the Bold button to switch to the bold variation of your selected font. If the font does not have a bold variation, CG automatically thickens the text for you.
	Click the Italic button to switch to the italicized variation of your selected font. If the font does not have an italicized variation, CG automatically slants the text for you.
	Click the Underline button to underline your text.

Table 3-7. Font Styles (Continued)

Button	Description
	Click the Small Caps button to apply small caps to your text. All lower case letters in your selection change to upper-case letters displayed at a percentage of the normal upper case size. Upper case letters, numbers, and punctuation symbols are not affected.

Font Size

You can change the size of the text inside your text object, and you can also change its aspect ratio to make it wider or narrower.

1 Select a text object.

To select only some of the text in your object, select the Selection tool in the Tools palette, hold the CTRL key, and drag your cursor over the text you want to select.

2 Switch to the Attributes tab of the Attributes palette.

3 In the Formatting section of the tab, use the Size and Aspect Ratio controls to change the height and width of your text.

- To change both the height and width of your selected text enter a new value in the Size field.
- To change only the width of your selected text enter a new value in the Aspect Ratio field. Higher values make your text wider and smaller values make your text narrower.

When text expands beyond the current height or width of a text object, the object formats its text depending on the constraints in its text object properties.

Table 3-8. Default Text Object Behavior when Resizing Text

Text Object Type	Behavior
Text Field	The size of Text Field objects is not constrained. Objects become larger or smaller to fit the size of the text inside.

Table 3-8. Default Text Object Behavior when Resizing Text

Text Object Type	Behavior
Text Constrained Field	The width and height of Text Constrained Field objects are constrained. If the text becomes too tall to fit inside the object, the text grows wider as its size increases. If the text becomes too wide to fit inside the object, the text grows taller. You are unable to increase the size or aspect ratio of text that completely fills a Text Constrained Field.
Paragraph Field	The size of Paragraph Field objects is not constrained. Objects become larger or smaller to fit the text inside.
Fixed-Width Paragraph Field	The width of Fixed-Width Paragraph Field objects is constrained, but the height is not. If the text becomes too wide to fit within the paragraph the text wraps to the next line, creating a new line if necessary.

To customize the behavior of text objects, see "Text Object Properties" on page 119.

Relative Embellishments

By default the size of an object's embellishments (edge, depth, and shadow) remain constant as its size changes. Select the Relative Embellishments checkbox in the Paragraph section of the Attributes tab to scale an object's embellishments as its size changes.

Text Alignment

Use the Attributes tab to change the alignment of your text.

Note: The text within Text Field objects cannot be aligned because the text always fills the object.

1 Select a text object.

2 Switch to the Attributes tab of the Attributes palette.

3 In the Paragraph section of the tab, click the Alignment buttons to change the way your text lines are aligned.

Table 3-9. Text Alignment

Button	Description
	Click the Align Left button to align your text to the left edge of the object.
	Click the Align Center button to center your text inside the object.
	Click the Align Right button to align your text to the right edge of the object.

Text Leading

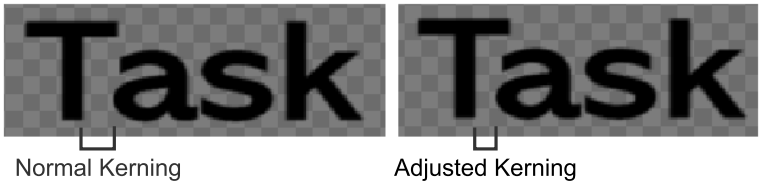
Leading refers to the amount of space between lines of text. In CG, leading is the number of scan lines between the lowest possible descender in one line and the highest possible ascender in the next line. The value in the Leading field in the Paragraph section of the Attributes tab represents the number of scan lines used between lines.

Text Kerning

The kerning value determines how much space is used between pairs of characters. Kerning is measured as the number of pixels added to or subtracted from the normal character spacing for the current font.

Kerning lets you adjust the spacing between one or more letters, which is useful for displaying characters with very wide ascenders or descenders.

Kerning can also be used to achieve special typographic effects.



To change the kerning after a single character, select the character and change the value in the Kerning field. To change the kerning between all of the characters in a text object, change the value in the Kerning field with no characters selected.

Right-to-Left Text Objects

To assign right-to-left text processing for a text object, check the Text Direction is Right to Left checkbox.

The CG module automatically detects the regional text-entry method of your Windows setup, but checking this checkbox adds additional processing to the object such as right-to-left punctuation.

Text Object Properties

Use the Text Object Properties options to customize your text object behavior:

1 Select a text object.

2 Switch to the Attributes tab in the CG Attributes toolbar and click the Text Objects Properties section.

3 Change the settings in the Text Object Properties section to customize the behavior of your selected text object.

Lock the Object Height

Select the Lock Object Height checkbox to prevent the text field's height from changing as more text is entered. When checked, new lines of text are added to the text field by shrinking the height of the existing text.

You can also lock an object's height by right-clicking it and choosing Constrain > Lock Object Height.

Lock the Object Width

Select the Lock Object Width checkbox to prevent the text field's width from changing as more text is entered.

When checked, additional controls set how the object behaves when text fills the text object:

- When the Constrain Text to Width control is checked the text in the field gets narrower to fit new text. Otherwise, any new text is placed outside the field and is not displayed unless the object is enlarged.
- The Enable Word Wrapping radio button appears when the text object's height is unlocked. When word wrapping is enabled your text is wrapped to a new line when you type beyond the edge of the field.

You can also lock an object's width by right-clicking it and choosing Constrain > Lock Object's Width.

Create New Text Object with Enter

When the Create New Text Object with Enter checkbox is checked, pressing the ENTER key creates a new text object below the current text object. Otherwise, pressing ENTER creates a new line within the existing text object.

Create New Text Object with Tab

When the Create New Text Object with Tab checkbox is checked, pressing the TAB key creates a new text object to the right of the existing text object. Otherwise, pressing TAB moves the text cursor to the next tab stop within the existing text object.

See "Tabs in Text Objects" on page 126 for information about tabs.

Cursor

Use the Cursor drop-down list to set the way the text cursor behaves when you select the text object.

- When the Insert Cursor is chosen, the text cursor appears within the text object when it is selected. This is useful for fields that need to be frequently edited without being completely re-written. The Insert cursor is the default cursor.

- When the Auto-Erase cursor is chosen, all of the text within the text object is selected when you click the object. This is useful for fields that are frequently re-written, such as sports scores.
- When the Lock Content cursor is chosen you will be unable to edit the text within the text object. You can unlock the object again by selecting it and choosing a different cursor.

Text Object Size

Every CG object is surrounded by an outline rectangle with grab handles at each corner and at the midpoints. Drag these grab handles to change the size of the object. For more precise sizing use the controls in the Text Object Properties section of the Attributes tab.

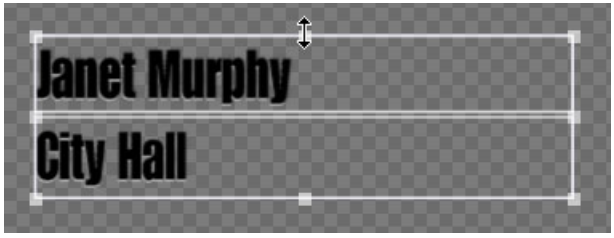
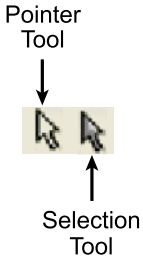


Figure 3-12. Resize Text Objects with Grab Handles

To change the size of an object with its grab handles:



1 Select one or more text objects in the CG workspace.

2 Select the Pointer tool or the Selection tool from the Tools palette.

3 Click and drag one of the grab handles to resize the object. Use the midpoint grab handles to resize only the vertical or horizontal dimension of the object, and use the corner grab handles to change both the height and width. When you release the mouse button CG redraws the object to the new size. The handle opposite to the one you dragged remains anchored.

   To maintain the object's aspect ratio, hold the SHIFT key while dragging the grab handle.

   To keep the object centered while changing its size, hold the ALT key while dragging the grab handle.

To change the size of an object with the Attributes tab:

1 Select one or more objects in the CG workspace.

2 Switch to the Attributes tab in the Attributes palette.

3 Click the Text Object Properties section of the tab.

4 Change the values in the Height and Width fields.

The object formats your text depending on the constraints of its text object properties.

Table 3-10. Default Text Object Behavior when Resizing Object

Text Object Type	Behavior
Text Field	The size of Text Field objects is not constrained. The size and aspect ratio of the text changes to fit the size of the object.
Text Constrained Field	Increasing the height or width of a Text Constrained Field does not change the size of the text inside the object. If the height or width of the object is decreased so that the text can no longer fit inside, the text's size and aspect ratio change to fit inside the object.
Paragraph Field	The size of Paragraph Field objects is not constrained. The size and aspect ratio of the text changes to fit the size of the object.
Fixed-Width Paragraph Field	The height of a Fixed-Width Paragraph field cannot be changed by dragging its handles. When the width of the object is changed, the text inside will wrap to best fit the inside of the object, adding or removing paragraph lines as necessary. The size of the text itself does not change.

To customize the properties of your text objects, see "Text Object Properties" on page 119.

Rows

Use rows when you need to create tables and leaderboards.

Rows are specially grouped text objects that can be easily edited and duplicated using shortcut keys and the Row menu. Click the Row button in the CG Editor toolbar to access the Row menu.

Create a New Table

1 Create the first row of your table by aligning several text objects to the same baseline, one object for each column. You can either nudge the objects into position or align them with the Alignment menu (see "Align Objects" on page 186).

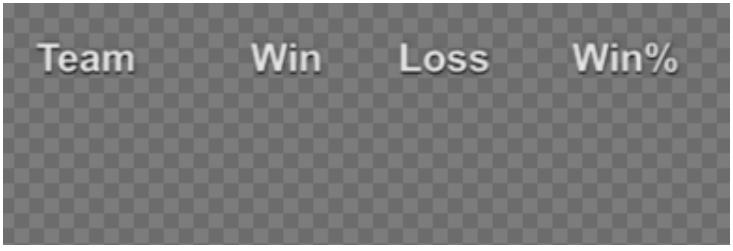
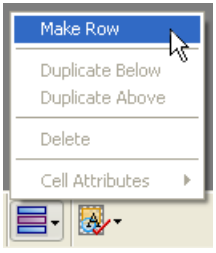


Figure 3-13. Four Text Objects

2 Hold the SHIFT key and click each text object, until all objects are selected.

3 Group all of the objects into a row using one of the following methods:



- Click the Row button in the CG Editor toolbar, then select Make Row from the menu.
- Press the CTRL+ENTER shortcut key.

The objects become individual cells in the first row of the table.

4 With one of the cells in the first row selected, create additional rows using the Duplicate Below option in the Row menu. You can also create a row above your table with the Duplicate Above option.

Each time you select the Duplicate Above or Duplicate Below option a new row is added to the top or bottom of the table. The cells in the rows line up with the cells in the other rows, forming table columns.

Figure 3-14. Table with Four Rows

Edit Row Text

Select a table cell with the Selection tool (or double click it with the Pointer tool) to edit the cell's text.

When you are finished editing the cell's text, press the DOWN ARROW key to move to the next cell, or the UP ARROW key to move to the previous cell.

Change Cell Attributes

More than one cell can be edited at one time. Hold the SHIFT key and click cells to select multiple cells, or draw a selection boundary around the cells you want to edit.

Since you can edit multiple cells at one time you can easily select and modify the properties of entire rows, columns, or blocks of cells. For example you can change the justification of each column, the text style of the top row, and the color of a block of table cells. By selecting and modifying multiple cells you can quickly create an attractive table or leaderboard with complex formatting.

To change the Attributes of one or more cells, right-click a cell selection and select Cell Attributes. You can choose whether to constrain the width or proportion of the cell and you can set the cell's cursor type. For more

information about text attributes and cursor types see "Text Object Properties" on page 119.

Figure 3-15. Table Formatted with Multiple Selection

Swap Rows

You can swap rows in a table using the Select and Swap options.

1 Select a cell in one of the rows.

2 Click on the Row button in the CG Editor toolbar and choose Select Row. You can also right-click in the cell and choose the Select Row option.

3 Select a cell in the row that you want to swap.

4 Click on the Row button and choose Swap. The two rows change position in the table.

Manage Rows

Use shortcut keys to manage table rows.

Table 3-11. Shortcut Keys for Row Management

Shortcut Key	Behavior
CTRL+SHIFT+C	Copies the entire row to the clipboard.
CTRL+SHIFT+X	Cuts the entire row, placing it in the clipboard.
CTRL+SHIFT+V	Pastes the row at the bottom of the table.
CTRL+SHIFT+ALT+V	Pastes the row at the top of the table.

Table 3-11. Shortcut Keys for Row Management (Continued)

Shortcut Key	Behavior
CTRL+SHIFT+UP ARROW	Moves the row up and swaps it with the row directly above.
CTRL+SHIFT+DOWN ARROW	Moves the row down and swaps it with the row directly below.

Unmake Rows

To ungroup the cells in a table, right-click in a cell and choose Unmake Row from the right-click menu. The cells in your table break apart into separate text objects.

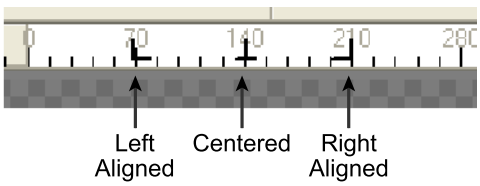
Spell Check Text

To spell check the text in a layout, right-click the CG workspace and select Spell Check from the right-click menu.

You can also spell check a specific object by right-clicking it and choosing Spell Check from the menu.

Tabs in Text Objects

To help you position and align text, all text objects except Text Paths can contain tab stops. The CG Ruler above the CG workspace displays the tab stops for your currently selected text object.

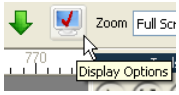


How your text cursor behaves when you press the TAB key depends on the text object's attributes and the way the tab stops are configured. See "Text Object Properties" on page 119 for information about Text Object Properties.

If the text object is set to create a new object when the TAB key is pressed, pressing the TAB key creates a new text object to the right of the existing object. Otherwise, the text cursor moves to the next tab stop within the text object. If there are no tab stops defined, the text cursor moves approximately 10 pixels away from the current position.

Show or Hide Tab Stops

You can choose to show or hide the tab stops within your currently selected text object.



1 Click the Display Options button in the CG toolbar. The Display Options menu opens.

2 Select the Tab Stops option. Your tab stops display as vertical yellow lines within any selected text objects.

3 To hide the tab stop markers, open the Display Options menu and clear the Tab Stops option.

Add a Tab Stop

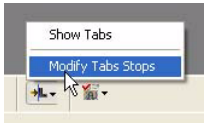
Add tab stops to your text objects by clicking in the CG Ruler. You can also use the Tab Editor dialog for more precise placement of multiple tabs.

To add a left-aligned tab stop with the CG Ruler:

1 Select a text object.

2 Click the mouse cursor within the CG Ruler to add a left-aligned tab stop at that location.

To add a tab stop with the Tab Editor:



1 Click the Modify Tab Stops button on the CG Editor toolbar, then select the Modify Tab Stops option. The Tab Editor opens.

2 In the Tab Details section of the dialog select the position and alignment of the tab stop.

3 Click the Plus button to add the tab stop to the Tab List.

4 Click the Close button to close the Tab Editor.

Modify a Tab Stop

You can modify tab stops in your text objects by dragging tab stops within the CG Ruler. You can also use the Tab Editor dialog for more precise editing of your tabs.

To modify the position of a text object's tab stops with the CG Ruler, select a tab stop in the CG Ruler and drag it to a new position.

To modify a text object's tab stops with the Tab Editor:

1 Click the Modify Tab Stops button in the CG Editor toolbar, then select the Modify Tab Stops button. The Tab Editor opens.

2 In the Tab Editor, select the tab stop you want to modify in the Tab List.

3 Click the Left arrow button. The tab stop's position and alignment information appears in the Tab Details section of the dialog.

4 Change the position and alignment of the tab stop in the Tab Details section.

5 Click the Right arrow button to replace the selected tab stop with the new tab details.

6 Click the Close button to close the Tab Editor.

Overlapping Tab Stops

You can choose whether text is allowed to overlap the text in other tab stops.

1 Select a text object.

2 Click the Modify Tab Stops button in the CG Editor toolbar, then select the Modify Tab Stops option. The Tab Editor opens.

3 In the Tab Editor select the Text may Not Overlap on the Tab Stops checkbox to prevent your text from overlapping. If you try to enter aligned text that will overlap the text in another tab stop, the text is automatically adjusted to prevent the overlap.

4 To allow your text to overlap, clear the Text may Not Overlap on the Tab Stops checkbox.

5 Click the Close button to close the Tab Editor.

Delete a Tab Stop

Delete tab stops in your text objects either by dragging them off the CG

Ruler or by using the Tab Editor.

To delete a tab stop with the CG Ruler:

1 Select a text object.

2 Select a tab stop in the CG Ruler and drag it off the edge of the ruler.

To delete tab stops with the Tab Editor:

1 Click the Modify Tab Stops button in the CG Editor toolbar, then select the Modify Tab Stops button. The Tab Editor opens.

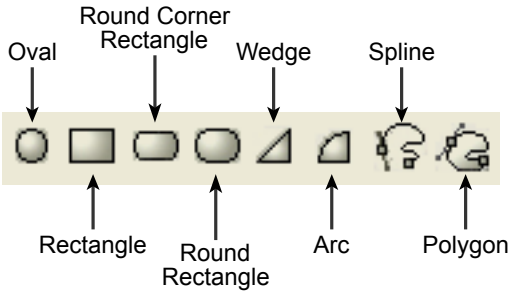
2 In the Tab Editor, select the tab stop you want to delete in the Tab List.

3 Click the Delete button. The tab stop is deleted from the list.

4 Click the Close button to close the Tab Editor.

Graphic Objects

Graphic objects are used to add colorful broadcast elements behind text, such as lower thirds and panels. Use the graphic tools in the Tools palette to create simple shapes such as ovals, rectangles, wedges, and arcs. The polygon and spline tools allow you to create more complex objects that consist of multiple bezier curves.



To add a graphic object to your layout, use the appropriate tool from the Tools palette. In most cases you add graphic objects to a layout by selecting a tool and drawing the object in the CG workspace.

Simple Shapes

CG provides a variety of simple shapes that can be quickly added to your layout. You can create rectangles, wedges, arcs, ovals, round rectangles, and round corner rectangles.

Table 3-12. Simple Shape Tools

Tool	Name	Tool	Name
	Rectangle		Oval
	Wedge		Round Rectangle
	Arc		Round Corner Rectangle

To create a new simple graphic object in a layout:

1 Select the appropriate graphic tool from the Tools palette.

2 Click and drag in the CG workspace to place, size, and orient the graphic object.

- To center the graphic where you clicked in the CG workspace, hold the ALT key while dragging. Otherwise, the point you clicked becomes one of the graphic's corners.
- Hold the SHIFT key while dragging to constrain the graphic's aspect ratio to 1:1. This ensures that circles and squares are perfectly constrained.
- To change the horizontal or vertical orientation of the graphic, drag the selected handle through the opposite boundary of the graphic. The graphic flips in the direction you drag.

Figure 3-16. Add a Rectangle to the Layout

Corner Trim

You can set the corner trim percentage for Round Corner and Clipped Corner Rectangle objects. Larger values create larger corners.

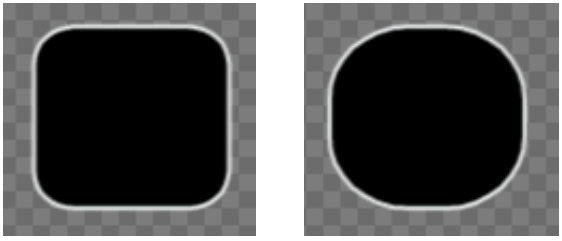


Figure 3-17. Round Corner Rectangles with 20% and 40% Corner Trim Values

To change the corner trim for Round Corner and Clipped Corner Rectangles:

1 Select a Round Corner Rectangle or a Clipped Corner Rectangle.

2 Switch to the Attributes tab of the Attributes palette.

3 In the Formatting section of the tab, change the Corner Trim value.

Polygons

Use the Polygon tool to add custom-made polygons to a layout.

1 Select the Polygon tool in the Tools palette.

2 Click the CG workspace to place the first point of the polygon.

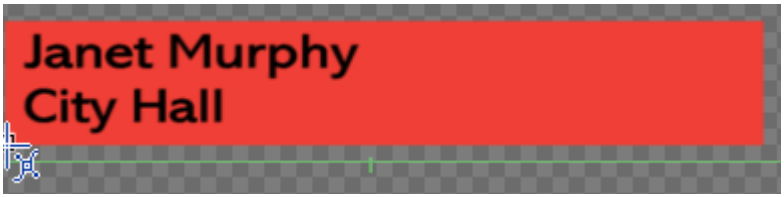


Figure 3-18. Place the First Point of a Polygon

3 Click the CG workspace to place the rest of the points. The boundary of the polygon draws between the points.

Hold the SHIFT key while clicking to make a point part of a curve instead of a straight line.

Figure 3-19. Add Points to a Polygon

4 To change the curvature of a point, position the Polygon tool or the Selection tool over the point until it becomes an arrow, then hold the ALT key and drag the point's control handles.

This creates convex and concave curves on either side of the point. You can continue to select and move the control points as long as you hold the ALT key.

Figure 3-20. Edit a Polygon's Control Points

5 To move one of the points, position the Polygon tool or the Selection tool over the point until it becomes an arrow, then drag the point to a new position.

6 To delete a point, position the Polygon tool or the Selection tool over the point until it becomes an arrow, then double-click the point.

Closed Beziers

To remove the fill from a polygon, switch to the Attributes tab of the Attributes palette and change its form to Closed Bezier. The Polygon becomes an outline.

To return the fill to the polygon change its form to Filled Bezier.

Lines and Splines

Use the Spline tool to add lines and splines to a layout.

1 Select the Spline tool in the Tools palette.

2 Click the CG workspace to place the first point of the spline.

3 Click the CG workspace to place the rest of the points. The spline is drawn in the workspace.

Hold the SHIFT key while clicking to make the point part of a curve instead of a straight line.

4 To change the curvature of a point, position the Spline tool or the Selection tool over the point until it becomes an arrow, then hold the ALT key and drag the point's control handles. This creates convex and concave curves on either side of the point. You can continue to select and move the control points as long as you hold the ALT key.

5 To move one of the points, position the Spline tool or the Selection tool over the point until it becomes an arrow, then drag the point to a new position.

6 To delete a point, position the Spline tool over the point until it becomes an arrow, then double-click the point.

Line Width

Use the Attributes tab to change the width of spline and closed bezier lines.

1 Select a spline or closed bezier object in the CG workspace.

2 Switch to the Attributes tab of the Attributes palette.

3 Change the Line Width value.

Line Ends

You can select three different line end types for spline objects. This setting determines the shape of the line ends and how far they extend beyond the control points.

The differences between line ends are more obvious for splines with large line widths.

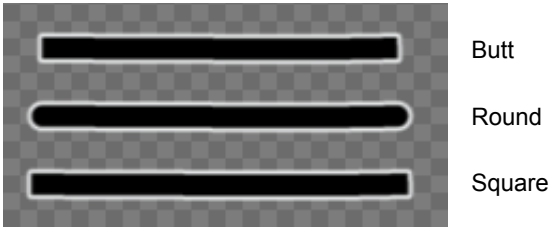


Figure 3-21. Three Different Line Ends

To change line ends:

1 Select a line or spline object in the CG workspace.

2 Switch to the Attributes tab of the Attributes palette.

3 Select a Line End from the drop-down list.

- Butt: The line stops directly on the first and last control points.
- Round: The line extends beyond the first and last control points with a rounded contour.

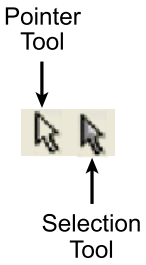
- Square: The line extends beyond the first and last control points with a square contour.

Change Graphic Object Size

Every CG object is surrounded by an outline rectangle with grab handles at each corner and midpoint. Use these grab handles to change the size of the object.

1 Select a graphic object in the CG workspace.

2 Select the Pointer tool or the Selection tool from the Tools palette.



3 Click and drag one of the handles to resize the object. Use midpoint grab handles to resize only the vertical or horizontal dimension of the rectangle, or use corner handles to resize both the horizontal and vertical dimensions. When you release the mouse button, CG redraws the object to the new size. The corner or midpoint opposite to the one you grabbed remains anchored.

   To maintain your object's aspect ratio, hold the SHIFT key while dragging the grab handle.

   To keep your object centered while changing its size, hold the ALT key while dragging the grab handle.

If you want more precise sizing use the controls in the Attributes tab:

1 Select a graphic object in the CG workspace.

2 Switch to the Attributes tab of the Attributes palette.

3 In the Formatting section of the tab, use the Width and Height controls to change the height and width of your graphic.

Relative Embellishments

By default the size of your object's embellishments (edge, depth, and shadow) remain constant as the object's size changes. Select the Relative Embellishments checkbox on the Attributes tab to scale your object's embellishments as its size changes.

Change Graphic Form

Once you have created a graphic object you can change its form using the Attributes tab.

1 Select a graphic object.

2 Switch to the Attributes tab of the Attributes palette.

3 Use the Form drop-down list to select a new form for the graphic object.

Logo Objects

Logos are commonly used for station identification images, corporate logos, or product logos. They let you add complex images with detailed alpha information in your layouts. If the CG graphic tools are not sufficient to allow you to create a graphic layout, you can use Paint or a third-party program to create a graphic and add it to your layout.

Logos are special graphic objects that can mix the face color with a bitmap image. You can scale and position logos anywhere in the layout. Any alpha transparency in the logo is maintained, allowing you to add edge, depth, and shadow elements which follow the logo's contour.

Logos can also be inserted inside text objects using the Selection tool and the Media Library. See "Insert Media into Text Objects" on page 108 for more details.

Add a Logo Object

You can add logo objects to your layout by either drawing the logo object with the Logo tool or by dragging images from the Media Library.

To add a logo with the Logo tool:

1 Select the Logo tool from the Tools palette.

2 Click and drag in the CG workspace to place, size, and orient your logo object.

- To center your logo where you clicked in the CG workspace, hold the ALT key while dragging. Otherwise, the point you clicked becomes one of the logo's corners.
- Hold the SHIFT key while dragging to constrain your logo's aspect ratio to 1:1.

3 Switch to the Attributes tab of the Attributes palette.

4 In the Logo Details section of the tab, click the Add button and select the image file you want to use for your logo. The image is applied to your logo object.

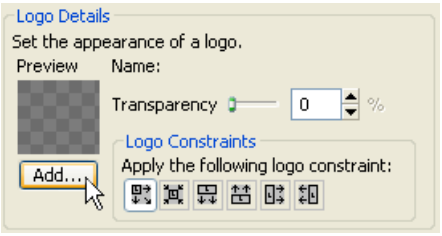


Figure 3-22. Add a Logo Object

To add a logo object from the Media Library:

1 Switch to the Media tab of the CG Libraries palette.

   If the logo you want to use is not already stored in one of the library boxes, see "The Media Library" on page 177 to learn how to add media to the Media Library.

2 Grab the media box containing your logo and drag it to the CG workspace.

3 Drop the logo in the CG workspace. The logo object is added to your layout.

Clicking a library box in the Media Library adds a full-sized logo object to your layout.

Add Logo Embellishments

Logo objects allow you to add edge, depth, and shadow embellishments which follow a logo's alpha information.

Many software packages let you create an alpha channel for your images. If your logo contains an alpha channel, CG reads this information and applies it to the logo object

allowing you to add edges, depths, and shadows which recognize the logo's transparent areas.

To learn about adding embellishments to your objects, see "Object Elements" on page 150.

Logo Mix

Tint the original color of the image by mixing it with a treatment. The tint options for logo objects are on the Face tab.

1 Select a logo object.

2 Switch to the Face tab of the Attributes palette.

3 Select a treatment in the Treatment drop-down list. For more information about treatments see "Element Treatments" on page 157.

4 Set the color and sheen for the object's face.

5 Change the mix between the logo image and the face color by dragging the Mix slider. You can also enter a value in the mix field. 0% shows only the logo image and 100% shows only the face color.

Figure 3-23. A Logo Image Mixed with a Radial Gradient Treatment

Change Logo Image

You can change a logo's image by adding a new image file on the Attributes tab, or by right-clicking the logo and choosing the "Change Image" option.

Constrain a Logo

An object's Constraint method sets the way a logo image is placed within the object's boundaries, and how it behaves when the object is resized. Use the Attributes tab to change the Constraint method.

1 Select the Logo tool in the Tools palette.

2 Click and drag in the CG workspace to place, size, and orient the empty logo object.

3 Switch to the Attributes tab of the Attributes palette.

4 In the Logo Constraints section of the tab select a Constraint method. These methods determine how the logo object behaves when you apply an image file to it.

Table 3-13. Logo Constraint Methods

Button	Description
	The logo image is sized to fill the object.
	The object becomes the size of the logo's image file.
	Maintaining the object's current width, the lower boundary of the object moves to fit the image file.
	Maintaining the object's current width, the upper boundary of the object moves to fit the image file.
	Maintaining the object's current height, the right boundary of the object moves to fit the image file.
	Maintaining the object's current height, the left boundary of the object moves to fit the image file.

5 In the Logo Details section of the tab, click the Add button and select the image file you want to use for the logo. The image is applied to the logo object according to the Constraint method.

6 If you change the size of the logo object, selecting a Constraint method changes the object boundaries or the image size accordingly.

Clock Objects

The clock objects that come pre-defined with TitleOne were created with RTX development tools. Use these clock objects to create digital clocks and digital timers in your layouts.

Feature Note If you purchased the RTXportss option you can use other custom clocks created with the RTX development tools. See "Port Objects" on page 145 to learn how to use RTX applications in TitleOne.

Add a Clock

Use the Port/Clock tool to add digital clocks and digital timers to your layouts.

1 On the Tools palette, right-click the Port/Clock tool.

2 From the right-click menu, select the clock you'd like to add. You can add a digital clock or a digital timer.

3 Click and drag in the CG workspace to define the size constraints of the clock. The clock is added at the size and position you specify.

Clock Appearance

Digital clocks and digital timers allow you to select a font for the clock object. You can also set the appearance of the font's face, edge, depth, and shadow.

Use the Attributes tab in the Attributes palette to set the appearance of your selected clock object.

Face and Edge

Switch to the Face and Edge tab within the Attributes tab to change the appearance of your clock's face and edge.

1 Select the clock's font from the Font Face drop-down list.

2 Select the font's face color from the Face Color drop-down list, and drag the transparency slider to set the face's transparency. You can also enter a value in the Transparency field. 0% is completely opaque and 100% is completely transparent.

3 Set the width of the font's edge using the Edge Width field.

4 Select the font's edge color from the color drop-down list, and drag the transparency slider to set the edge's transparency.

Depth and Shadow

Switch to the Depth and Shadow tab within the Attributes tab to change the appearance of the clock's depth and shadow.

1 Set the size and angle of the clock's depth property using the Depth field and the Angle field.

2 Select the depth's color from the Color drop-down list, and drag the Transparency slider to set the face's transparency.

3 Set the offset and angle of the clock's shadow using the Shadow Offset field and the Angle field.

4 Set the shadow's blur with the Blur control.

5 Select the shadow's color from the Color drop-down list, and drag the Transparency slider to set the shadow's transparency.

Scale Clock

In the Attributes tab, change the width and height of the clock using the Width and Height fields. Clear the Maintain Aspect Ratio checkbox to change the width and height of the clock independently.

You can also select a constraint method. These methods determine how your clock object behaves when its size is changed.

Table 3-14. Clock Constraint Methods

Button	Description
	The clock content is sized to fill the object.
	The object becomes the size of the clock content.

Table 3-14. Clock Constraint Methods (Continued)

Button	Description
	Maintaining the object's current width, the lower boundary of the object moves to fit the clock content.
	Maintaining the object's current width, the upper boundary of the object moves to fit the clock content.
	Maintaining the object's current height, the right boundary of the object moves to fit the clock content.
	Maintaining the object's current height, the left boundary of the object moves to fit the clock content.

Digital Clock Format

Switch to the Digital Clock Format tab within the Attributes tab to set the display options for the selected digital clock.

Table 3-15. Digital Clock Format Options

Option	Description
Hour Format	Select the 12 Hour Clock option to display the clock in 12 hour format, or select the 24 Hour Clock option to display the clock in 24 hour format.
Time Format	Sets the format for the clock. The default clock format is hours:minutes:seconds (hh:mm:ss).
Display Leading Zero	Select to always display the hour with two digits. For example, if the current time is 9:14 the clock displays 09:14.
Separator	Sets the separator for the clock. The default separator is a colon.

Table 3-15. Digital Clock Format Options (Continued)

Option	Description
AM Position	Sets where the AM/PM text appears. The default position is Right.
AM Symbol	Select the AM symbol from the drop-down list.
PM Symbol	Select the PM symbol from the drop-down list.

Digital Timer Format

Switch to the Digital Timer Format tab within the Attributes tab to set the display options for the selected digital timer.

Table 3-16. Digital Timer Format Options

Option	Description
Counter Format	Sets whether the timer counts up or down.
Time Format	Sets the format for the timer. The default timer format is hours:minutes:seconds (hh:mm:ss).
Display Leading Zero	Select to always display the hour with two digits. For example, if the current time is 9:14 the clock displays 09:14.
Separator	Sets the separator for the timer. The default separator is a colon.
Start at	Sets the starting time for the timer.
End at	If the timer is set to count up, select an ending time with the End at drop-down lists.
Count Until Next Take	When checked the timer will continue to count until the layout is taken offline.

Port Objects

If you purchased the RTXports option you can expand the capabilities of your layouts by adding Port objects. Port objects display layers of data created in their associated RTX applications.

Create an RTXports Application

RTXports applications are created with the RTX development tools. You can create multi-zone displays with infinite overlapping layers, real-time data updates in layouts, cascading effects, DVEs, 2D and 3D animations, and more.

Your RTXports application can use all the features of Inscriber RTX.

For sample code, see "RTXports Code Sample" on page 539.

Install an RTXports Application

Before CG can use a Port object, the object's RTXports application must be installed on the system.

1 Make sure TitleOne is closed.

2 Install the RTXports application.

3 Launch TitleOne. The Port object associated with the RTXports application is now available in the CG Tools palette.

Add a Port Object to the Layout

1 In the CG Tools palette, right-click the Port/Clock tool. A menu appears with a list of the installed RTXports applications.

If your system has no installed RTXports applications or the Port option is not enabled, the Tools palette contains the Clock tool instead of the Port/Clock tool and the right-click menu shows no ports.

2 From the right-click menu, select the Port object to add.

3 Use one of the following methods to add the Port object to your layout:

- For Port objects that are constrained to a certain size, click the CG workspace. The Port object is added with its top left corner positioned at the mouse cursor.
- For unconstrained Port objects, click and drag in the CG workspace to define the size constraints of the Port. It is added at the size and position you specify.

Port Attributes

Port objects can be designed with custom interfaces. If the Port object

provides an interface, switch to the Attributes tab of the CG Attributes palette. The options in the tab allow you to customize the Port.

Port Size

Some Port applications allow you to change the scale of Port objects. Use the Attributes tab to change the scale of Port objects with unconstrained sizes or aspect ratios.

If your Port object's size is unconstrained, change the width and height of the object using the Width and Height fields. If its aspect ratio is unconstrained, clear the Maintain Aspect Ratio checkbox to allow the Width and Height to be changed independently.

You may also be able to select a constraint method. These methods set how the Port object behaves when its size is changed.

Table 3-17. Port Constraint Methods

Button	Description
	The Port content is sized to fill the object.
	The object becomes the size of the Port content.
	Maintaining the object's current width, the lower boundary of the object moves to fit the Port content.
	Maintaining the object's current width, the upper boundary of the object moves to fit the Port content.
	Maintaining the object's current height, the right boundary of the object moves to fit the Port content.
	Maintaining the object's current height, the left boundary of the object moves to fit the Port content.

Clip Objects

Use clip objects to add full resolution, uncropped video clips to layouts.

Video clips can also be applied as Active Textures to existing objects in your layouts. See "Active Texture Treatment" on page 164 for more information.

Feature Note You must have the Clip Option enabled on your system before you can use clips and Active Textures

Supported Video Clips

An appropriate codec must be installed on your system before you can play video clips.

There are many different ways of encoding video clips, and video clip "codecs" allow your system to decode particular clip types. Computer operating systems come with some pre-installed codecs, but some specialized codecs must be purchased from third-party companies and installed on each system in order to play back those codec types.

CG supports any codec that is installed on your computer. For instance, if your computer has access to the codec for playing back a particular type of .avi file, CG will also be able to play that type of .avi.

CG also supports matte .avi files which include transparency information. By setting a clip's playback options you can keep or ignore the transparency.

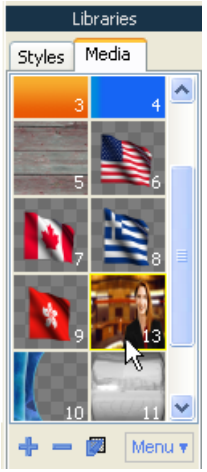
Add a Clip Object

You can add clip objects by either applying a clip to the face of an existing object or by inserting clips with the Media Library.

To learn how to insert video clips inside text objects, see "Insert Media into Text Objects" on page 108.

To add a new full resolution clip to your layout:

1 Switch to the Media tab of the CG Libraries palette.



If the video clip you want to use is not already stored in one of the library boxes, see "The Media Library" on page 177 to learn how to add media to the Media Library.

2 Double-click the media box containing the video clip. A new clip object is added to your layout with the video clip applied to its face.

To add a clip object to the face of an existing object:

1 Select an object in your layout.

2 Switch to the Face tab in the Attributes palette.

When you apply a clip to the face element of an object, all the other elements will adopt the clip as well.

3 Select the Active Texture treatment from the Treatment drop-down list.

4 In the Color section of the tab, click the Add button and select the video clip you want to use. The clip is applied to all of the elements in your object.

Clip Playback Options

Use the Face tab's Texture section to set how your clip is played.

- Enter a Start Delay for the clip to prevent the clip from playing until the delay has elapsed.
- Select the Ignore AVI Transparency checkbox to ignore an alpha channel in matte .avi media files.
- Select the Invert Field Order checkbox to invert the field order of your clip. You may need to do this if your clip appears jerky when you play the layout.
- When the display time of the layout is longer than the clip length, the clip automatically loops. To stop a clip from looping once it has finished playing clear the Loop the Playback checkbox.

Clip Alignment and Transparency

Since clips are usually full resolution objects it is not usually necessary to change the clip object's alignment or transparency. By default clips are aligned to the object's face and 100% opaque.

When video clips are being used as Active Textures the alignment and transparency of video clips become more important. See "Align the Active Texture" on page 165 and "Select Active Texture Transparency" on page 166 to learn how to change the alignment and transparency of a clip.

Change Video Clip

Use one of the following methods to change the video clip assigned to a clip object:

- Select the clip object and add a different video clip using the Face tab in the Attributes palette.
- Select the clip object and click the new video clip in the Media Library.
- Right-click the clip object and select the Change Media option.

Object Elements

Every object in your layout consists of four different elements: a face, one or more edges, a depth, and a shadow. In most cases the elements can also include a sheen.

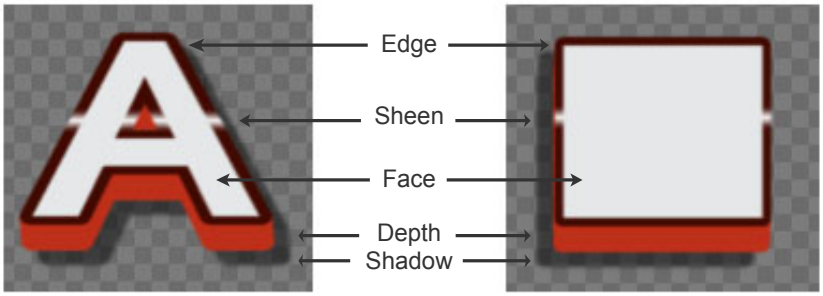


Figure 3-24: Object Elements

Customize the appearance of these elements by adjusting their settings and applying treatments to them.

When you change the size of an object, the size of the object's depth, edges, and shadow remain constant. Select the Relative Embellishments checkbox on the Attributes tab to scale an object's embellishments as its size changes. Since Relative Embellishment sizes are set according to the object's size, they are generally much smaller than they are when Relative Embellishments is cleared.

The Face Element

The face is the actual shape of the object. It is the top element of the object unless it is overlapped by one or more inside edges.

Use the Face tab to change the appearance of selected objects.

- Select a treatment from the Treatment list. The treatment you select determines the color, image, and active texture choices available for the face. See "Element Treatments" on page 157 to learn how to use treatments.
- Create a sheen for the object's face using the Sheen section of the tab. See "Sheen Elements" on page 155 to learn how to create sheens.

Edge Elements

Edge elements completely surround the face of the object. You can add up to ten edges to your object, and they can either overlap the face or extend beyond the face.

Use the Edge tab to add, edit, and remove edges for selected objects. By combining edges you can turn multiple objects into a complex shape with one or more continuous edges.

Edges cannot be added to Port objects.

Add an Edge

Each edge in an object can either overlap or extend beyond the face, and each edge can have its own sheen element.

The object's edges are displayed in the Edge tab's Defined Edges list. The edge at the top of the list is the innermost edge, and the edge at the bottom is the outermost edge.

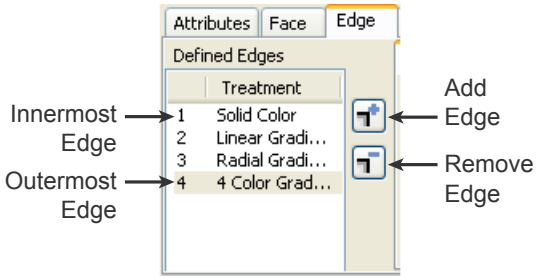


Figure 3-25. The Defined Edges List

The Settings and Sheen sections of the Edge tab allow you to edit the properties of the currently-selected edge.

To add an edge, click the Add Edge button. A new edge is added to your object. New edges automatically become the outermost edge and appear at the bottom of the Defined Edges list.

Figure 3-26. Add a Black Outside Edge to a Graphic Object

Edit an Edge

You can rearrange your edges, set their widths, add sheens, and add treatments to them. You can also set how they behave when the object is resized.

To edit an edge, select it in the Edge tab's Defined Edges list and use the controls in the Settings section of the tab.

1 Set the position for an edge:

- Select the Outside Edge radio button to display the edge outside the object's face and any other outside edges. If you switch an edge from the inside to the outside of an object it automatically becomes the outermost edge.
- Select the Inside Edge radio button to display the edge inside an object's face and any other inside edges. If you switch an edge from the outside to the inside of an object it automatically becomes the innermost edge.

2 Enter the width of the edge in the Edge Width field.

3 Select a treatment for the edge from the Treatment list. The treatment determines the color, image, and active texture choices available for the edge. See "Element Treatments" on page 157 to learn how to use treatments.

Create a sheen for the edge using the controls in the Sheen section of the Edge tab. See "Sheen Elements" on page 155 to learn about sheens.

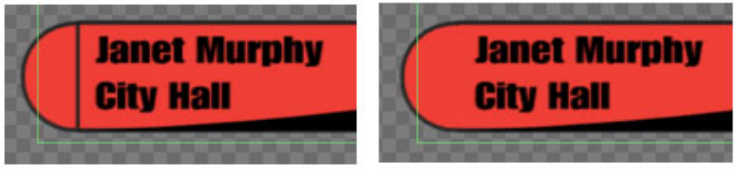
Remove an Edge

To remove an edge from an object, select the edge you want to remove in the Defined Edges list and click the Remove Edge button. The edge is removed and the other edges move to fill the gap if necessary.

Combine Edges

By default the edges of objects overlap the faces and edges of the objects beneath them. Use the Combine Edges button to bring several objects together onto one layer, causing their edges to disappear behind the overlapping faces.

This is most effective when you have overlapping graphic objects with identical face and edge settings. Combining their edges creates the appearance of a composite object with a combined edge.



A circle placed behind a rectangle. The rectangle's edge overlaps the circle.

The circle's edge and the rectangle's edge are now combined.

Figure 3-27. Combine Edges

To combine the edges of objects, select two or more objects and click the Combine Edges button in the CG Editor toolbar. The edges of the objects disappear where their faces overlap.

Combining the edges of two or more objects moves them all to the same layer. If you need to bring the combined objects forward or send them backward in the layer list, be sure to select all of the combined objects before you change their layer. See "Layer Objects" on page 192 to learn about layering your objects.

To stop an object from combining its edges, select it and move it up or down a layer. The object moves ahead or behind the other objects, separating its edges.

The Depth Element

The depth element extends away from an object at an angle, giving it the appearance of thickness and depth. The depth element can have a sheen applied to it.

Use the controls on the Attributes palette's Depth tab to change the depth properties of selected objects.

1 Set the total distance of the depth element using the Depth control.

2 Choose to place the depth inside or outside of the object's outer edges.

- Click the Inside button to position the depth element inside any outer edges defined for the object. The edges surround the depth element.
- Click the Outside button to position the depth element outside the edges of your object. The depth extends outwards from the object edges.

3 Select a treatment from the Treatment drop-down list. The treatment determines the color, image, and active texture choices available for the depth. See "Element Treatments" on page 157 to learn how to use treatments.

Create a sheen for the object's depth using the Sheen tab inside the Depth tab. See "Sheen Elements" on page 155 to learn about sheens.

Figure 3-28. Add Depth to Text Objects and a Logo Object

The Shadow Element

The shadow element appears behind all the other elements in an object. It is a color or pattern that is offset from the face and edge by a specific number of pixels.

Shadows add depth to flat 2D objects and provide an additional way of adding visual interest to your layouts.

Use the Shadow tab's Settings section to change an object's shadow properties.

1 In the Settings section of the tab, set the offset distance of the shadow element using the Offset control.

2 Set the shadow's blur with the Blur control. A greater value produces a softer, more diffuse shadow.

3 Use the Glow control to set the amount of glow in your shadow. A larger glow value spreads the shadow out from beneath your object in all directions.

4 Use the Angle control to change the angle of the shadow.

5 Select a treatment from the Treatment drop-down list. The treatment you select determines the color, image, and active texture choices available for the shadow. See "Element Treatments" on page 157 to learn about treatments.

Create a sheen for the shadow using the Sheen section of the Shadow tab. See "Sheen Elements" on page 155 to learn how to create sheens.

Figure 3-29. Add a Blurred Shadow to the Graphic Objects

Sheen Elements

A sheen refers to a band of color that cuts through an element, like a focused highlight. You can add a sheen to any of the visible elements in an object except elements using the active texture treatment.

1 Select an object.

2 Select the element you want to add a sheen to by switching to the Face, Edge, Depth, or Shadow tab.

3 If you are adding a sheen to an edge, select the edge you want to edit from the Defined Edges list.

4 Use the controls in the Sheen section of the tab to define the element's sheen.

- Select the Apply Sheen checkbox to add a sheen to the element. To remove the sheen, clear the Apply Sheen checkbox.
- Click the Color drop-down list to select the color for the sheen.
- Use the Width control to set the width of the sheen.
- Use the Offset control to set the offset of the sheen. Offset determines the sheen's position on the element. Higher offset values move the sheen toward the top of the element, and lower values move the sheen toward the bottom. An offset of zero places the sheen in the middle of the element.

- Use the Angle control to rotate the sheen.
- If you are adding a sheen to an edge element, click the Apply to All Existing Edges button to add an identical sheen to all of your object's edges.

Figure 3-30. Add a Rotated Blue Sheen to a Graphic Object

Element Treatments

One treatment can be applied to each element in a layout object. These treatments dictate the color, image, and Active Texture choices available for the elements they are applied to.

A treatment can also be applied to the layout background. See "Layout Backgrounds" on page 199.

- The Solid Color treatment adds a single color to an element.
- The Linear Gradient, Radial Gradient, and 4 Color Gradient treatments add a mix of colors to an element.
- The Image treatment adds an image file to an element.
- The Active Texture treatment adds a moving image to an element. You must have the Clip Option activated on your system before you can add Active Textures and clip objects to your layouts.
- The None Treatment makes an element completely transparent.
- You can add Beveled Edge and Tube Edge treatments to edge elements.

Apply a Treatment

To apply a treatment to an object:

1 Select one or more objects in the CG workspace.

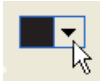
2 Select the element you want to edit by switching to the Face, Edge, Depth, or Shadow tabs in the Attributes palette.

3 If you are editing an edge, select the edge you want to edit from the Defined Edges list.

4 Select the treatment you want to apply from the Treatment drop-down list.

Use the controls in the tab to customize the treatment. See the sections below for an explanation of the controls for each treatment.

Mix and Manage Colors



Customizing treatments often involves choosing one or more colors. Click a color drop-down list to select a color using the Color Palette. See "The Color Palette" on page 169 for information about choosing, creating, and managing colors for your layouts.

Transparency

Many treatments allow you to set a transparency value with a slider control. Drag the slider to the right to select 100% transparency (completely invisible), and drag it to the left to select 0% transparency (completely opaque).

You can also enter a transparency percentage in the number field.

Color Treatments

Solid Color

Use the Solid Color treatment to apply a single color to an element.

Figure 3-31. The Solid Color Treatment

The controls for the Solid Color treatment are in the Settings section of the Edge, Depth, and Shadows tab. They are in the Color section of the Face tab.

1 Click the Color drop-down list to select a solid color with the Color Palette.

2 Drag the Transparency slider to change the transparency of the element.

Linear Gradient

Use the Linear Gradient treatment to apply a two-color linear gradient to an element. Linear gradients shade from one color to another in a straight line.

Figure 3-32. The Linear Gradient Treatment

The controls for the Linear Gradient treatment are in the Settings section of the Edge, Depth, and Shadows tab. They are in the Color section of the Face tab.

1 Select the colors for the linear gradient:
   a Click the first Color drop-down list to select the first color for the gradient. By default the first color is applied to the top of the element.
   b Click the second Color drop-down list to select the second color for the gradient. By default the second color is applied to the bottom of the element.
   c Use the first Color slider to set how far from the top of the element the gradient begins.
   d Use the second Color slider to set how far from the bottom of the element the gradient ends.
2 Enter values in the Transparency fields to set the transparency of the first and second colors.
3 Increase the number of Gradient Steps to make the gradient repeat one or more times on the element. This creates a "bar" effect as the gradient repeats.
4 Use the Angle control to rotate the gradient.

Radial Gradient

Use the Radial Gradient treatment to apply a two-color radial gradient to an element. Radial Gradients shade from one color to another within a growing circle.

Figure 3-33. The Radial Gradient Treatment

The controls for the Radial Gradient treatment are in the Settings section of the Edge, Depth, and Shadows tab. They are in the Color section of the Face tab.

1 Select the colors for the radial gradient.
   a Click the first Color drop-down list to select the first color for the gradient. By default the first color is applied to the center of the element.
   b Click the second Color drop-down list to select the second color for the gradient. By default the second color is applied to the perimeter of the element.
   c Use the first Color slider to set how far from the center of the element the gradient begins.
   d Use the second Color slider to set how far from the perimeter of the element the gradient ends.
2 Enter values in the Transparency fields to set the transparency of the first and second colors.
3 Increase the number of Gradient Steps to make the gradient repeat one or more times on the element. This creates a "bull's-eye" effect when the gradient repeats.

4 Color Gradient

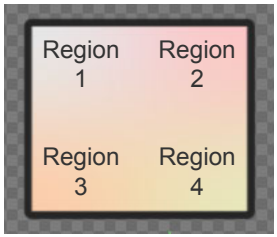
Use the 4 Color Gradient treatment to apply a four-color gradient to the element. Four-color gradients shade between four colors, with one color in each corner of the element.

Figure 3-34. The 4 Color Gradient Treatment

The controls for the 4 Color Gradient treatment are in the Settings section of the Edge, Depth, and Shadows tab. They are in the Color section of the Face tab.

To set the colors and transparencies for the four corners of the element, follow these steps for every region:

1 From the Region list, select the region of the element that you want to apply a color to.



The first region is in the upper-left corner of the element, the second is in the upper-right corner, the third is in the lower-left, and the fourth is in the lower-right.

2 Click the Color drop-down list to select the color for the region.

3 Use the Transparency slider to set the transparency of the region.

None Treatment

The none treatment makes the element totally transparent. This is useful when you need to have space reserved for an element but no element visible within that space.

Figure 3-35. The None Treatment Applied to the First Edge of an Object

Select the None treatment from the Treatment drop-down list. Your element becomes completely transparent.

Image Treatment

Use the Image treatment to apply an image to the element. The image can be tinted and aligned in various ways.

Figure 3-36. The Image Treatment

Add an Image Treatment to an Object

You can quickly apply an image to a face element using the Media Library. Use the Edge, Depth, or Shadow tab to apply an image to other elements in an object.

To apply an image to an object's face using the Media Library:

1 Select the Pointer tool in the Tools palette.

You must use the Pointer tool to apply an image treatment to text objects. If you use the Selection tool instead, the logo is inserted into the text object. See "Insert Media into Text Objects" on page 108 to learn about inserting logos into text objects.

2 Select the object you want to edit.

3 Switch to the Media tab of the CG Libraries palette.

If the logo you want to use is not already stored in one of the library boxes, see "The Media Library" on page 177 to learn how to add media to the Media Library.

4 Grab the media box containing your logo and drag it to the object.

5 Drop the logo in the object. The image is applied to the object's face.

To apply an image to an object's face, edge, depth, or shadow without using the Media Library:

1 Select an object in the CG workspace.

2 Select the element you want to edit by switching to the Face, Edge, Depth, or Shadow tabs.

3 If you are editing an edge, select the edge you want to edit from the Defined Edges list.

4 Select the Image treatment from the Treatment drop-down list.

5 If you are editing an edge, depth, or shadow element, switch to the Settings section of the tab.

6 Click the Add button and select the image file you want to use. The image is applied to the element.

Align the Image

Image files can be aligned to the element in various ways.

- To re-size the image so it completely fills the element, select the Fit to Shape option from the Display drop-down list.
- To tile the image instead, select either the Tile to Shape or Tile to Layout option from the Display drop-down list.

  When an image is tiled to the layout, it is positioned relative to the boundaries of the layout. Otherwise it is positioned relative to the object's boundaries.

  Set the position of the tiled image with the Position drop-down list, then refine the position by changing the X and Y Offset values.

Change the size and transparency of the image with the Scale and Transparency controls.

Tint the Image

Tint the color of the image by mixing it with a linear gradient. Linear gradients shade from one color to another along a straight line.

To configure the linear gradient and tint settings use the controls in the Tint section of the tab.

l Select the settings for the linear gradient.

  a Click the first Color drop-down list to select the first color for the gradient. By default the first color is applied to the top of the element.

  b Click the second Color drop-down list to select the second color for the gradient. By default the second color is applied to the bottom of the element.

  c Use the first Color slider to set how far from the top of the element the gradient begins.

  d Use the second Color slider to set how far from the bottom of the element the gradient ends.

  e Increase the number of Gradient Steps to make the gradient repeat one or more times on the element. This creates a "bar" effect when the gradient repeats.

  f Use the Angle control to rotate the gradient.

2 Change the mix between the image and the linear gradient by entering a value in the Mix field. -1.00 shows only the image and 1.00 shows only the linear gradient.

Active Texture Treatment

The Active Texture treatment applies a moving image to text or graphic objects. Active Textures are usually looped video clips which add texture and motion to several objects in a layout.

You can only apply one Active Texture to each object, and you are not able to use any other treatments on the object.

Feature Note You must have the Clip Option activated on your system before you can use Active Textures and video clips in your layouts.

Add an Active Texture Treatment to an Object

You can apply an Active Texture to an object with the Media Library or the Face tab.

To apply an Active Texture to an object using the Media Library:

1 Select the Pointer tool in the Tools palette.

You must use the Pointer tool to apply an Active Texture treatment to text objects. If you use the Selection tool instead, the Active Texture is inserted into the text object. See "Insert Media into Text Objects" on page 108 to learn about inserting Active Textures into text objects.

2 Select the object you want to edit.

3 Switch to the Media tab of the CG Libraries palette.

If the Active Texture you want to use is not already stored in one of the library boxes, see "The Media Library" on page 177 to learn how to add media to the Media Library

4 Grab the media box containing the Active Texture and drag it to the object.

5 Drop the Active Texture in the object. The Active Texture is applied to all the elements in the object.

To apply an Active Texture to an object using the Face tab:

1 Select an object in the CG workspace.

2 Switch to the Face tab in the Attributes palette.

When you apply an Active Texture to the face element, all of the other elements will adopt the Active Texture as well.

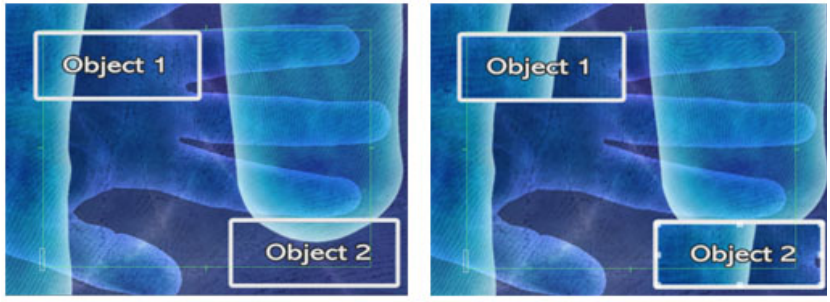
3 Select the Active Texture treatment from the Treatment drop-down list.

4 In the Color section of the tab, click the Add button and select the Active Texture file you want to use. The file is applied to all of the elements in the object.

Align the Active Texture

Use the Face tab to set the alignment for the Active Texture.

- Select the Align to Layout radio button to align the Active Texture to the upper-left corner of the element. This option allows multiple objects to show different portions of a large Active Texture, depending on their layout positions.
- Select the Align to Object radio button to align the Active Texture to the upper-left corner of the element. All objects using this texture and alignment option show the same section of the texture, regardless of their layout position.



Active Textures aligned to layout Active Textures aligned to object

Figure 3-37. Two Objects with Different Active Texture Alignments

To re-size the element so it is the same size as the Active Texture file, click the Resize to Fit Texture button.

Select Active Texture Transparency

Every element in an object can have independent transparency settings for the Active Texture. You can set independent transparencies for the four corners of the element.

To set the Active Texture transparency for an element, switch to the Texture section of that element's tab.

1 Click the Region drop-down list to select the corner you want to set the transparency for. To set the transparency for the entire element, select the "All" region.

2 Set the transparency for the region with the Transparency slider.

Set Active Texture Options

Use the Face tab's Texture section to set how Active Textures are played.

- Enter a Start Delay for the Active Texture to prevent the texture from playing until this delay has elapsed.
- Select the Ignore AVI Transparency checkbox to ignore an alpha channel in matte .avi files.
- Select the Invert Field Order checkbox to invert the field order of your media. You may need to do this if the Active Texture appears jerky when you play the layout.
- When the display time of the layout is longer than the Active Texture clip, the texture automatically loops. To stop a texture from looping once it has finished playing clear the Loop the Playback checkbox.

Edge Treatments

You can apply two special treatments to object edges.

Beveled Edge

Beveled text gives standard two-dimensional characters a three-dimensional look. Beveling involves shading text with color and transparency so that it appears three-dimensional. When the bevel colors shade from a darker

layout background to a lighter object face, the beveled edge makes the object appear to "press out" from the background.

Figure 3-38. Beveled Edges with Bevel Values of -0.50, 0, and 0.50

l In the Settings section of the Edge tab, select the bevel colors for your selected edge.
   a Click the first Color drop-down list to select the first color for the edge. The first color is applied to the inside of the edge, closest to the face.
   b Click the second Color drop-down list to select the second color for the edge. The second color is applied to the outside of the edge.
   c Use the first Color slider to set how far from the inside of the edge that the color gradient begins.
   d Use the second Color slider to set how far from the outside of the edge that the color gradient ends.
2 Enter values in the Transparency fields to set the transparency of the first and second colors.
3 Use the Bevel control to set the apparent curvature of the bevel. Lower values make the bevel appear to be concave and greater values make the bevel appear convex.

Tube Edge

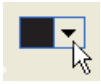
The Tube treatment gives edges a rounded appearance. The edges appear to be "tubes" surrounding the object's face.

Figure 3-39. Tube Edges with Bevel Values of -0.50, 0, and 0.50

1 In the Settings section of the Edge tab, select the tube colors for the selected edge.
   a Click the first Color drop-down list to select the first color for the edge. The first color is applied to the middle of the edge.
   b Click the second Color drop-down list to select the second color for the edge. The second color is applied to the perimeter of the edge, closest to both the face and the outside of the edge.
   c Use the first Color slider to set how far from the inside perimeter of the edge that the color gradient begins.
   d Use the second Color slider to set how far from the outside perimeter of the edge that the color gradient ends.
2 Enter values in the Transparency fields to set the transparencies of the first and second colors.
3 Use the Bevel control to set the thickness of the tube. Lower values make the tube thicker and higher values make the tube thinner.

The Color Palette

The Color Palette gives quick access to pre-defined colors. You can customize the palette by adding new colors and you can save and load your customized palettes. The colors you add to the Color Palette are automatically saved with your layouts.



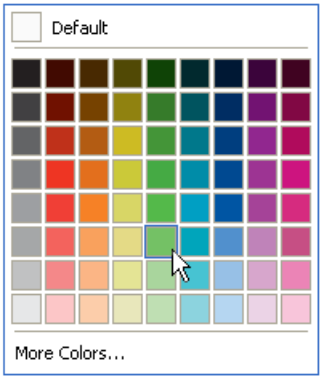
Open the Color Palette by clicking on a color drop-down list.

Select a Palette Color

The Color Palette stores all of the pre-defined and custom colors for the current layout. You can quickly apply these colors to CG elements.

The Color Palette opens when you click a color drop-down list. The palette displays color chips for all the predefined and custom colors in the layout.

Select one of the color chips to apply the color to the selected CG element. To apply the most recently used color, select the Default color chip.



Create a New Color

To create a new color instead of selecting an existing one from the palette, click the More Colors button at the bottom of the Color Palette. The Color Dialog opens. The Color Dialog contains controls for choosing new colors.

The pre-defined and custom colors for the layout appear at the bottom of the Color Dialog.

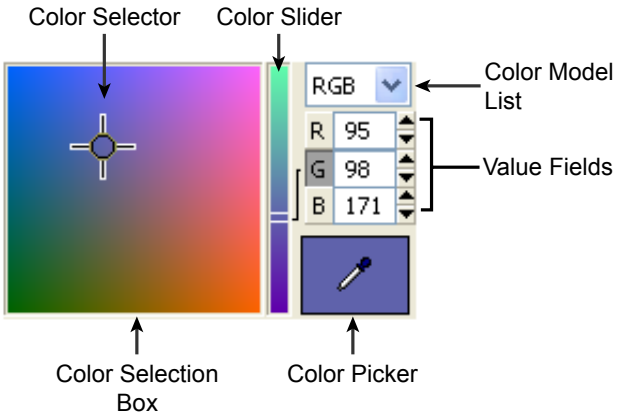


Figure 3-40. The Color Selector

In the Color Dialog use one of three color models (HSV, RGB, or HLS) to select colors. You do not have to fully understand the models in order to select colors. With a bit of practice you can find a color using any of the color definition systems.

In all three color models, color definitions are the result of three values. When you modify one value, the range of possible colors that can be achieved using the other two values changes, so the color display changes as well. Use the Color Selector and the Color Slider to get close to the color definition that you want and then change the three values numerically until you reach the specific color.

Table 3-18. Color Models

Color Model	Description
HSV	Hue, Saturation, and Value. This model often appeals to artists and others who work with pigments. It describes colors in terms of tint (hue), tone (saturation), and shade (value).

Table 3-18. Color Models (Continued)

Color Model	Description
RGB	Red, Green, and Blue. This model is an additive model where the amount of red, green, and blue are added together to determine the final color.
HLS	Hue, Lightness, and Saturation. Unlike HSV, the HLS color model represents saturation and lightness as independent values.

Use the Color Model drop-down list to change the color model, and press the buttons beside the Value Fields to assign a variable to the Color Slider. For example, select the RGB Color Model and click the G button to assign the G variable to the Color Slider. Use the Color Slider to change the assigned variable's value, and use the Color Selector crosshair to change the values of the other two variables.

You can also use the Color Picker tool to select any color visible on the screen. Grab the Color Picker icon and drag it around your operating system's desktop. Release the mouse button to select the color of the pixel that the Color Picker is on top of.

To modify a color that has already been defined in the Color Palette, click a color chip at the bottom of the dialog. The Color Slider and the Color Selector crosshair move to reflect the values of the chosen color.

Add Colors to the Color Palette

Once you have chosen a color with the Color Dialog you can add it to the color palette. This is useful if you frequently use the same customized colors in your layouts.

Click the Add to Palette button in the Color Dialog to add a color to the color palette. The new color appears at the bottom of the palette, allowing you to quickly use it again without needing to recreate it.

Manage Colors

If you use the Color Palette often, organize the colors in the palette by deleting and replacing the colors you don't need. You can start with a fresh palette by clicking the Clear button in the Color Dialog.

To delete a color, select it in the Color Dialog and click the delete button. It is removed from the Color Palette.

To replace a color:

1 In the Color Dialog select the color chip you want to replace.
2 Use the controls in the Color Dialog to create a new color.
3 Press the Replace button. The color chip you selected is replaced.

Manage Palettes

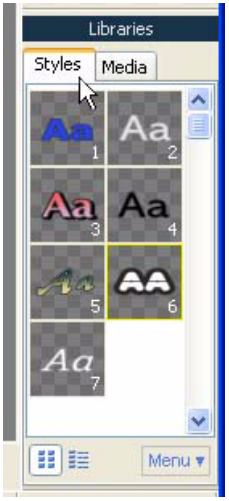
Color Palettes are automatically saved with your layouts, but you can save frequently-used Color Palettes for use in other layouts.

In the Color Dialog window choose to save or load Color Palettes:

- Click the Save As button to save a Color Palette to a .palette file.
- Click the Load button to load a .palette file. The current Color Palette is replaced by the loaded palette.

The Style Library

Styles are sets of attributes for CG objects. Attributes include the sizes, fonts, colors, and treatments of object elements.



The Style Library collects and organizes the styles in your layout. It provides a quick and easy way to re-use styles within CG without needing to recreate them for every object. By building a list of commonly-used styles you can apply a standardized look to the text and graphic objects in a layout.

The Style Library also lets you transfer styles between the layouts in your playlist, and your styles can be saved and loaded using the Styles Library Manager.

To access the Style Library, switch to the Styles tab of the CG Libraries palette. All the styles display according to your current view settings. Hold the mouse cursor over a style to view the style's number, name, and attributes.

Add a Style to the Library

Once you have set the attributes and treatments of an object, add the object's style to the Style Library.

1 Select the text or graphic object in the layout.

2 On the Styles tab of the CG Libraries palette, select Menu > Add Style to Library. The Style Name dialog opens.

3 Give the style a number and a name.

4 Click OK. The style is added to the Style Library.

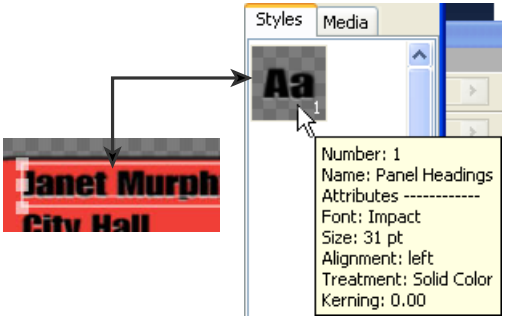


Figure 3-41. Add a Style to the Style Library

Apply a Style to an Object

Once you have added a style to the Style Library, you can apply the style to other objects in the layout.

Select the objects you want to apply the style to and use one of the following methods:

- Click the style in the Style Library.
- Right-click the style in the Style Library and select Apply Style.
- Within the Style Library, select Menu > Apply Style.
- Drag the style from the Style Library and drop it on the object. This method works if you have only one object selected.

Set as Default Style

If you want all new objects to be created with a specific pre-made style, set that style as the default style. Within the Style Library, right-click a style and select Set as Default Style. All new objects are created with the default style.

Change View Settings

Style Thumbnails

Click the Thumbnails button to view the styles as a series of numbered thumbnails. Click the List View button to view the styles as a list of smaller thumbnails, with style number and style name information included.

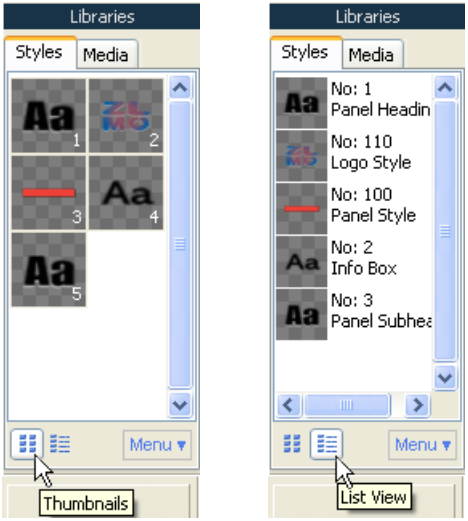


Figure 3-42. The Style Library's Thumbnail and List Views

Style Range

By default the Style Library displays only the styles for the current layout. Within the Style Library, select Menu > View All Styles to display the styles for all the layouts in the playlist.

Select Menu > View Selected Layout's Styles to return to the default setting.

Manage Styles

You can update, reorder, and delete the styles in the Style Library. Styles can also be added to the Global Style Library, which contains a library of styles for your current template registry.

Update a Style

To update a style stored in the Style Library, select an object with the new style attributes, right-click the style you want to update, and select Update to Current Style. The style changes in the library to reflect the new attributes.

Updating a style does not affect any objects in your layout that use the old style attributes.

Reorder Styles

Styles can be dragged to new positions within the Style Library. When you grab a style chip and drop it in another position, the style moves to the new position.

The style chip's number does not change when it is moved.

Delete a Style

To delete an unwanted style, right-click it in the Style Library and select Delete Style from Library. The style is removed.

Global Style Library

Use the Global Style Library to build a collection of styles that you need to use with a particular template registry.

Template registries are collections of templates and styles which are used to create layouts. By adding templates and styles to template registries you can better organize and share styles within different projects. For more information about registries see "Template Registries" on page 234.

To add a style to the Global Style Library, right-click the style in the Style

Library and select Add to Global Style Library. The style is stored in the global library and can be loaded into any other layout.

Open the Global Style Library to load a style:

1 Select Menu > Open Global Style Library. The Global Style Library opens.

2 Select the template registry you want to use from the drop-down list. If the registry is not in the drop-down list, click Open and navigate to the correct .templates file.

3 Select the style you want to load from the list of styles.

4 Click the Load button. The style is added to your layout's Style Library.

Manage Global Style Libraries

Since Global Style Libraries are saved with template registries, you can use the Registry Manager to share styles between different registries.

1 To open the Registry Manager, select Menu > Open Registry Manager. The Registry Manager opens.

   The left and right sides of the Registry Manager allow you to open two different registry files simultaneously. The current registry is automatically loaded into the left side of the window.

2 Click the Open button above the right list to open the template registry you want to copy styles to or from.

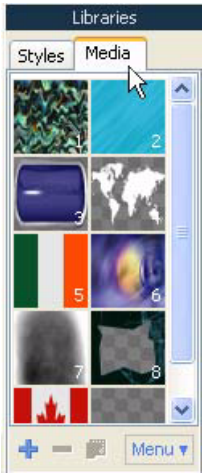
3 Select the Text Style Library option from the drop-down lists below both lists. The Global Style Libraries for both registries are displayed.

4 Select the styles you want to copy, then click the Copy Left or Copy Right button to copy them to either registry.

See "Template Registries" on page 234 for more details about using the Registry Manager.

The Media Library

Use the Media Library to create a standardized collection of images, video clips, clocks, and Ports. The Media Library makes it easy to re-use media within CG without needing to repeatedly import media files. It also allows you to quickly drag media objects into your layout, into existing layout objects, or into layout backgrounds.



You can use the Media Library to transfer media between the layouts in a playlist. When you save a layout the Media Library is saved with it.

To access the Media Library, switch to the Media tab of the CG Libraries palette. The stored media is displayed according to the current view settings. Hold the mouse cursor over a media box to see the file location, name, and type of the media.

Feature Note You must have the Clip Option enabled on your system before you can add video clips to layouts or the Media Library.

Add Media to the Library

Add image files and video files to the Media Library using one of the following methods:

- Right-click a library box and select Add Media to Library.
- Click the Plus button at the bottom of the Media tab.
- Within the Media Library, select Menu > Add Media to Library.

When the Open dialog appears, select the image files or video files you want to add and click the Open button. The media is added to the library.

Add a Port to the Library

You can add Port objects to the Media Library by dragging them from the CG workspace and into the library. You can also select a port and select Menu > Add Selected Port to Library.

Apply Media

Add a Logo Object

Logos are special graphic objects that mix a face color with a bitmap image. They are commonly used for station identification images, corporate logos, or product logos.

To add a logo object to a layout with the Media Library, grab the media box containing the logo and drag it to the CG workspace. The logo object is added to the layout. You can also double-click a library box in the Media Library to add a full-sized logo object to the layout.

See "Logo Objects" on page 137 for information about adding embellishments, tints, and constraints to logos.

Add a Clip Object

Clip objects are commonly used to add full resolution, uncropped video clips to layouts.

To add a new clip to a layout with the Media Library, grab the media box containing the clip and drag it to the CG workspace. The clip object is added to the layout. You can also double-click a library box in the Media Library to add a full-sized clip object to the layout.

See "Clip Objects" on page 147 for information about setting clip alignment, transparency, and playback options.

Feature Note You must have the Clip Option enabled on your system before you can add video clips to layouts or the Media Library.

Add an Active Texture Treatment to an Object

Add a video clip to an object element to apply a moving image to text and graphic objects. Active Textures are commonly looped video clips used to add texture and motion to several layout objects.

To apply an Active Texture to an object using the Media Library:

1 Select the Pointer tool in the Tools palette.

2 Select the object you want to edit.

3 In the Media tab of the CG Libraries palette, grab the media box containing the video clip and drag it to the object.

4 Drop the Active Texture in the object. The Active Texture is applied to all the elements in the object.

See "Active Texture Treatment" on page 164 for information about setting Active Texture alignment, transparency, and playback options.

Feature Note You must have the Clip Option enabled on your system before you can add Active Textures to layouts or the Media Library.

Insert Media into Text Objects

Video clips and image files can be inserted into text objects. Inserted media adopts the style and size of the object text and they stay within the text as the object is moved.

To insert media into a text object using the Media Library:

1 Select the Selection tool in the Tools palette.

2 Select the text object you want to insert the media into. A blinking text cursor appears inside the object

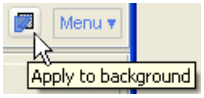
3 Within the Media Library, grab the media box containing the media and drag it to the text object.

4 Drop the media in the object. The media appears at the beginning of the first line of text, with the blinking text cursor after it.

See "Insert Media into Text Objects" on page 108 to learn how to move and duplicate media within text objects.

Add Media to the Background

To add media to the background of a layout, select the media you want to apply and click the Apply to Background button at the bottom of the Media Library.



See "Layout Backgrounds" on page 199 to learn more about layout backgrounds.

Media Range

By default the Media Library displays only the media for the current layout. Within the Media Library, select Menu > View All Media to display the media for all the layouts in the playlist.

Select Menu > View Selected Layout's Media to return to the default setting.

Delete Media

To delete unwanted media, right-click it in the Media Library and select Delete Media from Library. The media is removed.

Manage Objects

CG provides many ways of selecting, arranging, and organizing the objects in your layouts. Objects are selected with the mouse or with the keyboard, and they can be easily moved, aligned, and distributed. They can also be grouped in order to maintain their position.

Use the Layer buttons in the CG Editor Toolbar to change the layering of your objects, to control the way they overlap in the layout.

Sometimes it is easiest to select and edit large numbers of objects in a tree view. Use the Layout Tree View window to select, layer, lock, duplicate, name, and delete objects.

Select Objects

You must select objects before you can modify or position them in the layout. CG provides a Pointer tool to help you select and manipulate objects, and a Selection tool to give you more control over the text and control points within the objects.

When you double-click an object you automatically switch to the Selection tool.

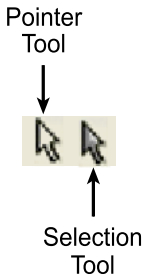


Table 3-19. The Pointer and Selection Tools

	Pointer Tool	Selection Tool
Overview	Moves, modifies, rotates, duplicates, and scales objects.	Moves, modifies, rotates, and scales objects. Selects control points and text.
Graphic Object Selection	Selects the entire object.	Selects the entire object.

Table 3-19. The Pointer and Selection Tools (Continued)

	Pointer Tool	Selection Tool
Spline Object Selection	Selects the entire object.	Selects the object and automatically displays all the control points within the spline. Drag the control points to edit the spline shape.
Text Object Selection	Selects the entire object.	Selects the object and automatically places a text cursor inside the object. Hold the CTRL key and drag the mouse cursor to select a range of text.
Duplicate Objects	Hold the ALT key and drag an object to duplicate it.	Objects cannot be duplicated with the Selection tool.

Select Objects with the Mouse

Use the Pointer or Selection tool to select objects.

1 Select either the Pointer or Selection tool.

2 Select an object. The object is outlined with a selection boundary.

Figure 3-43. A Selected Object

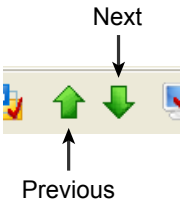
If you select a text object with the Selection tool, a text cursor is automatically placed in the text. If you select a spline object with the

Selection tool, the control points in the spline are automatically visible. Otherwise, the entire object is selected.

To select a range of text within a text object, hold the CTRL key and drag the Selection tool over the text you want to select. You can also hold the SHIFT key and press the LEFT ARROW and RIGHT ARROW keys to expand the text selection.

Figure 3-44. Select a Range of Text

3 To select the next object in the layout, click the Next button in the CG toolbar. To select the previous object click the Previous button.



4 If you want to select multiple objects so you can change their position or attributes simultaneously, hold the SHIFT key as you click the objects. You can also draw a selection boundary around the objects you want to select.

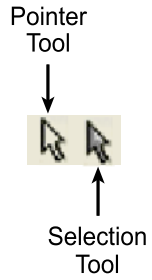
Figure 3-45. Select Multiple Items with a Selection Boundary

In large layouts with overlapping objects it is sometimes easiest to select objects with a tree view. See "The Layout Tree View" on page 194 for more information.

Select Objects and Text with the Keyboard

Use the ARROW keys and the TAB key to quickly navigate between objects in a layout.

1 Select an object with either the Pointer or the Selection tool.



2 Use the ARROW keys to navigate between objects or to navigate within paragraph objects.

- If the entire object is selected, press the DOWN ARROW key to select the next object in the layout. Press the UP ARROW key to select the previous object in the layout.
- If the text cursor is within a paragraph object, press the DOWN ARROW key to move down through the paragraph lines and press the UP ARROW key to move up through the lines. When the cursor is on the last line, press the DOWN ARROW key to move to the next item in the layout. Pressing the UP ARROW key when the cursor is on the first line selects the previous item in the layout.

  To select text within a text object, hold the SHIFT key while pressing the ARROW keys. A range of text is selected.

3 Use the TAB key to navigate between objects.

Switch the Selection Mode before using TAB to navigate between text objects, otherwise a tab stop is added to your text.

a When your text cursor is blinking in a text object, press the ESC key to switch to Selection Mode. Your text cursor is removed from the text object.

b Press the TAB key to move to the next object in the layout, and press the SHIFT+TAB key to move to the previous object in the layout.

c If you want to edit a selected text object, press the SPACEBAR to enter Edit Mode. A text cursor appears in the text object, allowing you to edit the text.

Position Objects

There are several ways to position and orient the objects in a layout. They can be moved with the Pointer and Selection tools, the keyboard, the Position fields, or the Nudge buttons.

Their spacing relative to each other or to the layout can be changed with the Alignment and Distribution menus.

Move Objects

Move objects in the CG workspace with the Pointer and Selection tools, the keyboard ARROW keys, and the Nudge buttons. You can also select an exact position for your objects by entering values in the Position X and Position Y fields.

- Use the Pointer and Selection tools to quickly drag selected objects within the layout.
- Enter new X and Y coordinates for selected objects by typing values in the Position fields in the CG Editor toolbar.

  If more than one object is selected, the coordinates are based on the top-left object in the selection.

  The Position X value is the distance from the left edge of the layout. Position Y is the distance from the top edge of the layout.
- Use the Nudge button in the CG Editor toolbar to move selected objects by a certain number of pixels in either a horizontal or vertical direction.

  a Enter the number of pixels to nudge by in the Pixel Shift field.

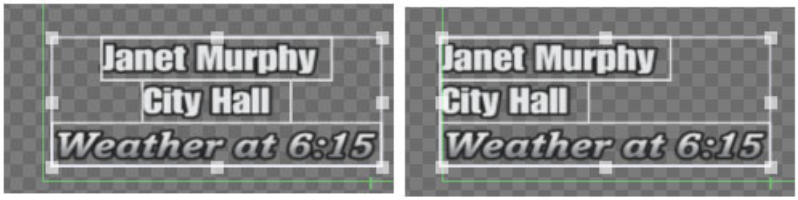
  b Nudge the selected objects using the Nudge button in the CG Editor toolbar.

  - The Nudge button displays the last nudge direction you used. Click the Nudge button to nudge the selected objects in that direction.
  - To nudge in a different direction, click the arrow beside the Nudge button and click the Nudge Left, Nudge Right, Nudge Up, or Nudge Down button in the flyout menu.
- Use the ARROW keys to move selected objects either horizontally or vertically.
  - Press the ARROW keys to move the objects one pixel at a time.
  - Hold the SHIFT key while pressing the ARROW keys to move the objects 10 pixels at a time.

- Hold the CTRL key while pressing the ARROW keys to move the objects by the number of pixels specified in the CG Editor toolbar's Pixel Shift field.

Align Objects

Use the Align menu or the Attributes tab to quickly align objects to the safe title area or to each other.



Align center to object Align left to safe title area

Figure 3-46. Align Objects

To align objects in a layout:

1 Select the objects you want to align in the CG workspace.

2 Access the alignment controls with one of the following methods:

- Click the arrow beside the Alignment button in the CG Editor toolbar to open the alignment menu. By clicking directly on the Alignment button you can also quickly align objects using the last-used alignment type.

- If at least one of the selected objects is a graphic object, switch to the Attributes tab of the Attributes palette. There are alignment controls in the Alignment section of the tab.

3 Select the type of alignment you want to use:

- Select the Align to Object radio button to align the objects to their own horizontal and vertical boundaries.
- Select the Align to Layout button to align the objects to the safe title area boundaries. See "Video Safe Title Area" on page 104 for information about displaying and modifying the safe title area.

4 Click an alignment button.

Table 3-20. Align to Object Options

Button	Description
	Align Left to Object: The objects move horizontally so their left boundaries are aligned with the leftmost object.
	Align Center to Object: The objects move horizontally so their center axes are aligned with the center of the selection.
	Align Right to Object: The objects move horizontally so their right boundaries are aligned with the rightmost object.
	Align Top to Object: The objects move vertically so their top boundaries are aligned with the topmost object.
	Align Middle to Object: The objects move vertically so their center axes are aligned with the middle of the selection.
	Align Bottom to Object: The objects move vertically so their bottom boundaries are aligned with the bottommost object.

Table 3-21. Align to Layout Options

Button	Description
	Align Left to Safe Title Area: The objects move horizontally so their left boundaries are aligned with the left edge of the safe title area.
	Align Center to Safe Title Area: The objects move horizontally so their center axes are aligned with the center of the safe title area.

Table 3-21. Align to Layout Options (Continued)

Button	Description
	Align Right to Safe Title Area: The objects move horizontally so their right boundaries are aligned with the right edge of the safe title area.
	Align Top to Safe Title Area: The objects move vertically so their top boundaries are aligned with the top edge of the safe title area.
	Align Middle to Safe Title Area: The objects move vertically so their center axes are aligned with the middle of the safe title area.
	Align Bottom to Safe Title Area: The objects move vertically so their bottom boundaries are aligned with the bottom edge of the safe title area.
	Align Left to Center of Safe Title Area: The objects move horizontally so their left boundaries are aligned with the center of the safe title area.
	Align Right to Center of Safe Title Area: The objects move horizontally so their right boundaries are aligned with the center of the safe title area.
	Align Bottom to Middle of Safe Title Area: The objects move vertically so their bottom boundaries are aligned with the middle of the safe title area.
	Align Top to Middle of Safe Title Area: The objects move vertically so their top boundaries are aligned with the middle of the safe title area.

Distribute Objects

Use the Distribution menu or the Attributes tab to automatically adjust the spacing between objects in a layout.

Objects before distribution

Objects after Selected Objects Top distribution

Figure 3-47. Distribute Objects

To distribute objects in a layout:

1 Select the objects you want to distribute in the CG workspace.

2 Access the distribution controls using one of the following methods:

- Click the arrow beside the Distribution button in the CG Editor toolbar to open the Distribution menu. You can also quickly distribute objects using the last-used distribution option by clicking directly on the button.
- Switch to the Attributes tab in the Attributes palette. The distribution controls are in the Distribution section of the tab.

3 Select a distribution option.

Table 3-22. Distribution Options

Option	Description
	Selected Objects Left: The objects move horizontally so their left boundaries are evenly spaced.
	Selected Objects Right: The objects move horizontally so their right boundaries are evenly spaced.

Table 3-22. Distribution Options (Continued)

Option	Description
	Selected Objects Bottom: The objects move vertically so their bottom boundaries are evenly spaced.
	Selected Objects Top: The objects move vertically so their top boundaries are evenly spaced.
	Selected Objects Horizontal Center: The objects move vertically so their horizontal centers are evenly spaced.
	Selected Objects Vertical Center: The objects move horizontally so their vertical centers are evenly spaced.

Lock Objects

You may want to lock the position of certain objects to prevent them from being moved accidentally.

To lock the position of an object, right-click the object in the CG workspace and select the Lock Position option. Unlock an object by choosing the Unlock Position option.

You can also lock objects using the Layout Tree View. See "The Layout Tree View" on page 194 for more information.

Prevent Objects from Rolling or Crawling

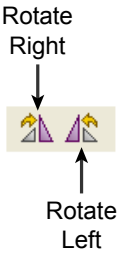
If you want a selected object to stay motionless on a roll or crawl layout, select the object, switch to the Attributes tab, and clear the Scroll with Crawl/Roll checkbox. This option is only available for objects that are completely on the first page of the layout.

For more information about layout types, see "Create Layouts" on page 229.

Rotate and Flip Objects

You can rotate objects using the Rotate buttons, the Attributes tab, or the Rotate tool.

To rotate selected objects:



- Click the Rotate Right and Rotate Left buttons in the CG Editor toolbar to rotate objects 90 degrees.
- In the Formatting section of the Attributes tab in the Attributes palette, change the value in the Rotation field.

  For text objects, the Rotation field is on the Text Object Properties section of the Attributes tab.
- Position the Pointer or the Selection tool near the object's handle until it turns into the Rotate tool. Click and drag the object clockwise or counter-clockwise.

Figure 3-48. Rotate Objects with the Rotate Tool

To flip graphic objects, grab one of the object's handles with the Pointer or Selection tool then drag the handle through the object's opposite boundary. The object flips across the boundary.

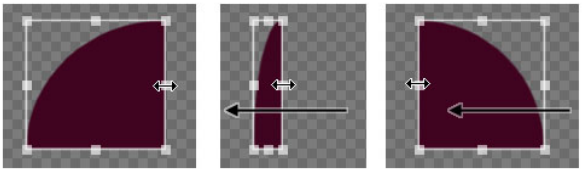


Figure 3-49. Flip a Graphic Object

Gradients, Images, and Active Textures do not flip with the objects. You cannot flip text objects.

Layer Objects

Layers allow you to overlap the objects in a layout. Each object is on its own layer unless you combine the edges of several objects.

A logo object ahead of the text objects

A logo object behind the text objects

Figure 3-50. Send a Semi-Transparent Logo Object Backward

The background object is always on the bottom layer, but the other objects in a layout can be moved forward and backward with the Layer buttons and the right-click menu.

When you select one or more objects and click a Layer button in the CG Editor toolbar, the objects move forward or backward according to the button selected.

Table 3-23. Layer Buttons

Button	Description
	Bring to Front: Moves the selected object in front of all the objects in the layout.
	Bring Forward: Moves the selected object in front of the object currently ahead of it.
	Send to Back: Moves the selected object behind all the objects in the layout. You cannot move an object behind the layout's background.
	Send Backward: Moves the selected object behind the object currently behind it.

You can also move objects by right-clicking them and choosing Bring to Front or Send to Back from the right-click menu.

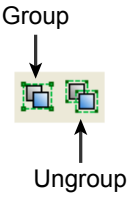
When the edges of objects are combined, all of the combined objects move to the same layer. To change the layering of combined objects while still maintaining their edge appearance, be sure to select all the combined objects before changing their layer. See "Combine Edges" on page 152 to learn more.

In large layouts with overlapping objects it is sometimes easiest to change object layers in a tree view. See "The Layout Tree View" on page 194.

Group Objects

The objects in a layout can be grouped together to help you maintain the spacing of the text and graphics. When an object in a group is moved, all the objects within the group are moved as well.

Click the Group button in the CG Editor toolbar to group two or more selected objects. If you click the Group button when both a group and an ungrouped object are selected, all the selected objects are grouped together.



When you select one object in a group, the entire group is surrounded by a boundary but only the object you clicked on is selected. The selected object is surrounded with a white boundary while the unselected objects have a blue boundary.

Figure 3-51. Three Grouped Objects with Only One Selected

All of the objects in a group move together when one of the objects is moved. Changes to object attributes only affect selected objects.

Click the Ungroup button to break apart the selected object's group. If the selected object is part of more than one group, only the most recently created group is released.

The Layout Tree View

In large layouts with overlapping objects it is sometimes easiest to edit the layout with a tree view. The tree view displays all of the objects in a layout and allows you to select them, change their z-order, lock them, duplicate them, and delete them.

You can also assign News Tags to text objects by changing their default names. Use tags with News Edit to quickly modify the content of tagged objects. See "Use Tags" on page 206.

The objects in the Layout Tree View are arranged by z-order, allowing you to quickly see which objects are ahead of other objects.

Open the Layout Tree View

Select Tools > Layout Tree View to open the Layout Tree View window. The objects in the layout are displayed in the Layout Tree View list. On your output, objects that are higher in the list are displayed in front of objects that are lower in the list.

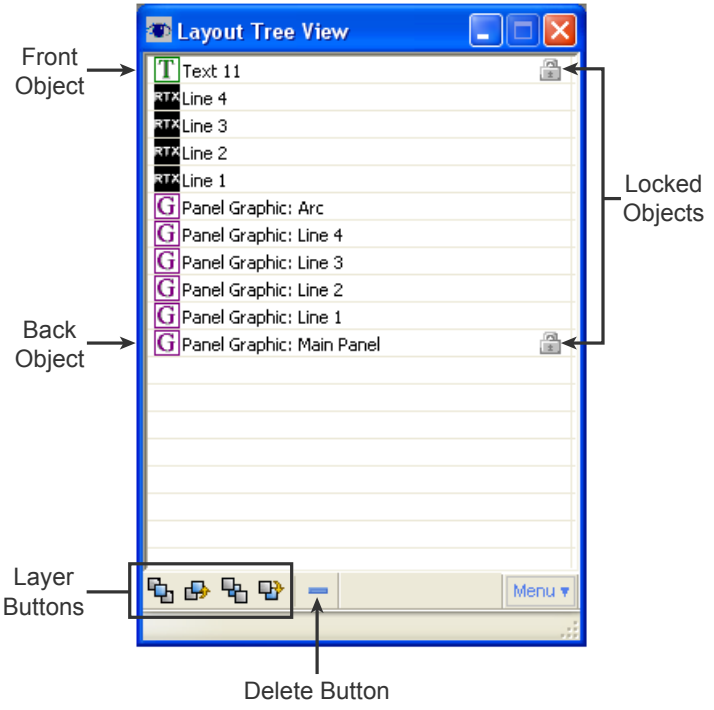


Figure 3-52. The Layout Tree View

The names of the objects are displayed in the list. If you haven't given the objects a name or assigned News Tags to them, the objects have a default name.

Each object has an object type icon:

Table 3-24. Object Type Icons

Icon	Description
	Regular text objects without News Edit tags.
	Graphic objects.
	Text Objects with News Edit tags assigned to them.

Click the Menu in the Layout Tree View window to change the size of the object type icons. Select Menu > Large Icons to make the icons larger and select Menu > Small Icons to make them smaller.

Manage Objects

Select Objects

When you select an object in the Layout Tree View, the object is also selected in the CG workspace. To select the previous object in the list press the UP ARROW key. Press the DOWN ARROW key to select the next item in the list.

Use the CTRL key to select multiple objects. You can also select multiple objects by holding down the SHIFT key and pressing the UP ARROW and DOWN ARROW keys.

Change Object Names

You can change the default names of any objects in the Layout Tree View list.

News tags are automatically added to objects when their default names are changed. Use tags with News Edit to quickly modify the content of tagged objects. See "Use Tags" on page 206.

To change the name of an object, double-click it in the Layout Tree View list and give it a new name. You can also rename an object by right-clicking it in the Layout Tree View list and choosing Rename from the menu.

A News Tag is automatically added to the object when you first change its default name.

Note: If you are adding a tag to a logo or clip object, start the tag name with "**image_**". This makes it easier to update your images and video clips using Inscriber MOS.

Change Object Layers

Objects are arranged by z-order in the Layout Tree View list. Objects that are higher in the list are displayed in front of objects that are lower in the list.

Change the z-order of the objects by dragging them in the list or by clicking the layer buttons.

- Drag selected objects up or down the list. Drag objects higher in the list to bring them forward, and drag objects lower in list to send them backward.
- To use the layer buttons, select the object you want to move and click one of the layer buttons at the bottom of the Layout Tree View window.

Table 3-25. Layer Buttons

Button	Description
	Moves the selected object in front of all the objects in the layout.
	Moves the selected object in front of the object currently ahead of it.

Table 3-25. Layer Buttons (Continued)

Button	Description
	Moves the selected object behind all the objects in the layout.
	Moves the selected object behind the object currently behind it.

Duplicate Objects

The Layout Tree View allows you to quickly duplicate the objects in a layout by copying, cutting, and pasting them.

Press CTRL+C to copy selected objects in the Layout Tree View, or press CTRL+X to cut them. You can also right-click the Layout Tree View and select Cut or Copy.

To paste objects in the Layout Tree View, select an object in the Layout Tree View list, right-click the Layout Tree View window, and select one of the following options:

Table 3-26. Paste Options

Option	Description
Paste	Pastes the objects above the currently-selected object.
Paste Below	Pastes the objects below the currently-selected object.
Paste Replace	Replaces the currently-selected object with the copied or cut object. This option is not available when multiple objects are being copied or cut.

Lock Objects

Use the Layout Tree View to lock the objects in the layout. Locked text

objects can still be selected and edited, but they cannot be moved. Locked graphic objects cannot be selected, edited, or moved.

To lock one or more selected objects, right-click the Layout Tree View window and select Lock Position. The objects are locked and display a lock icon in the Layout Tree View list.

Delete Objects

To delete an object in the Layout Tree View, select an object from the list and click the Delete button. The object is deleted.

Layout Backgrounds

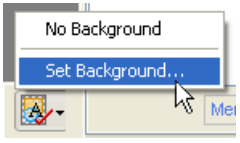
Layout backgrounds are video transparent by default, but you can use a color, image, or Active Texture treatment to block the video signal.

Video transparent areas in layouts are marked by a fill pattern. In the example below, all of the areas filled with the grey checkered pattern are transparent when the layout is taken to video. The pattern is not included in the final rendered image, it simply shows you where the live video feed appears while you work on the layout.

Figure 3-53. A Layout Without a Visible Background Treatment

Set a Layout Background

Unlike other parts of layouts, backgrounds are special objects that cannot be selected with the Pointer or Selection tools. Use the Set Background dialog to edit backgrounds.



To open the Set Background dialog, click the Background button on the CG Editor toolbar and select the Set Background option. You can also open the Set Background dialog by right-clicking the CG workspace and choosing the Change Background option.

Within the Set Background dialog, select the treatment you need to use from the Treatment drop-down list. Treatments dictate the color, image, and Active Texture choices available for the background.

- The Solid Color treatment adds a single color to the background.
- The Linear Gradient, Radial Gradient, and 4 Color Gradient treatments add a mix of colors to the background.
- The Image treatment adds an image file to the background.
- The Active Texture treatment adds a moving image to the background.
- The None treatment makes the background completely transparent.

Once you have chosen a treatment, use the controls in the Set Background dialog to customize the treatment's appearance. The controls for background treatments are similar to those described in "Element Treatments" on page 157, with the exception of the Image treatment.

Image Treatment

Use the Image treatment to apply an image file to your background. The options available for image backgrounds are slightly different than the options available for other objects.

Select the Image treatment from the Treatment drop-down list, then click the Add button and select the image file you want to use. The image is applied to the background.

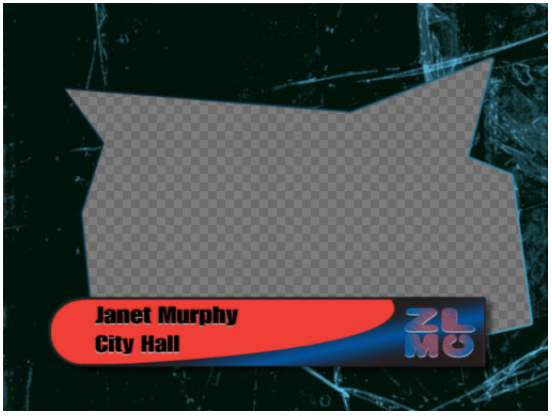


Figure 3-54. An Image Treatment Applied to the Background

Align the Image

To align the image in the background, click the Size As radio button to re-size the image so it completely fills the background, or click the Tile the

Image radio button to tile the image at its original size. The image is aligned to the upper-left corner of the layout.

Image Transparency

Set the transparency of the background image's regions with the Transparency controls.

1 Select the background region you want to set the transparency for.
   - Select All from the Transparency drop-down list to set a uniform transparency for the entire background.
   - Select Top Half to set the transparency for the top half of the background.
   - Select Bottom Half to set the transparency for the bottom half of the background.

2 Set the region's transparency by dragging the Transparency slider, or enter a value in the Transparency field. 0% is completely opaque and 100% is completely transparent.

3 Set the angle of the transparency by changing the value in the Angle field.

Remove a Background

To remove a background from a layout, click the Background button on the CG Editor toolbar and uncheck the Show Background option.

Update Layouts

News Edit lets you quickly update layout text and logos. You can update text without having to type it in each time, so you don't have to worry about formatting or spelling. Logos can be updated using commands sent by Automation Interface.

By adding tags to layout text you can link text objects to external data sources. You can also use tags to allow TitleOne operators to edit text objects without being able to modify the rest of the layout.

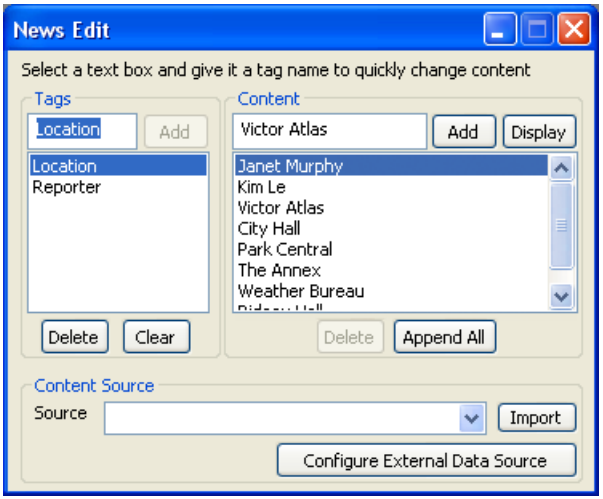


Figure 3-55. News Edit

Use News Edit

The options in News Edit let you quickly update the text in a layout.

Open News Edit

Click the News Edit button on the CG Editor toolbar. News Edit opens in a separate window and remains on top of your CG interface until you close the window.

Use the Content section of the tab to add, display, and manage the names and phrases that you want to use in the layout. Use the Tags section of the tab to label and quickly update the objects in the layout. See "Use Tags" on page 206 for more information about tagged objects.

Select News Edit Tables

The names and phrases you define are stored in one or more News Edit Tables. These tables are stored within TitleOne's template registries. To learn more about registries see "Template Registries" on page 234.

By default, the Content list displays the items stored in the first News Edit Table within the current template registry. This table is called "0 Import Text" and is where text is automatically stored when you select the "Import News Edit Table" option.

You can select a different News Edit Table by selecting a different source from News Edit's Source drop-down list. The items in the selected News Edit Table become available in the Content list.

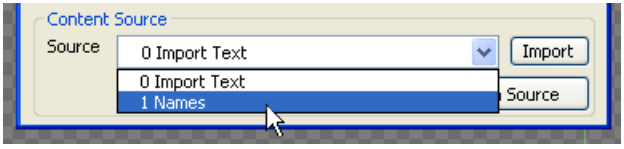


Figure 3-56. Select a News Edit Table

Create a News Edit Table

Use the Template Manager to create a new News Edit Table in the current template registry.

1 Select File > Template Manager > News Edit Tables. The Template Manager opens and displays all the News Edit Tables available for the currently selected template registry.

   If you want to work with a different template registry, click the Open button and navigate to the .templates file you need to use. See "Template Registries" on page 234 for more information about registries.

2 Click the Add button to add a new News Edit Table to the template registry. The Add News Edit Item dialog opens.

3 Enter a number and name in the Add News Edit Item dialog and then close the dialogs.

The new News Edit Table automatically contains the Content items that are within the first News Edit Table in the template registry.

Add Items to the Content List

The Content list contains a list of items stored in the currently selected News Edit Table. These items are typically names, places, and other phrases you frequently use in your layouts.

To add new items to News Edit's Content list, enter the text into the Content field and press the Add button. The text is added to the list as a new item, and is also added to the currently selected News Edit Table.

Note: When you import a News Edit Table (see "Import a News Edit Table" on page 205), the "0 Import Text" News Edit Table is automatically overwritten. If you plan on importing News Edit Tables in the future, do not add items to the "0 Import Text" News Edit Table. Instead, create a new News Edit Table and select it in the Content Source drop-down list before adding items.

Update Layout Text

Use the Display button to update the text in a text object.

1 Select the text object you want to update.

2 In News Edit, select the text you want to use from the Content list. The text appears in the Content field, where you can edit it if necessary.

3 Click the Display button. The text object updates to display the text in the Content field.

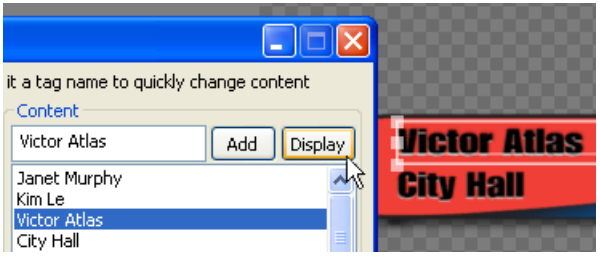


Figure 3-57. Update Layout Text

You can also update text by selecting a text object and double-clicking a text entry in the Content list.

Append All

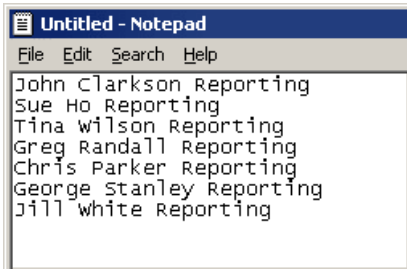
To insert the entire Content list of items into the currently selected text object, click the Append All button. Each term appears on a new line within the text object.

Manage Content Sources

You can maintain multiple News Edit Tables for layouts which require different names and phrases. The News Edit Tables are stored within one or more template registries. See "Template Registries" on page 234 for information about loading and saving registries.

Import a News Edit Table

Sometimes it's easier to import a News Edit Table than it is to add each Content item individually. News Edit Tables can be created in a simple text editor like Windows Notepad.



1. Enter a list of terms in a text editor. To open the Notepad text editor in Windows, select Start > Programs > Accessories > Notepad.
2. Save the list of terms as a .txt file.
3. In CG, select File > Import > Import News Edit Table.
4. Import the .txt file. The Template Manager opens after you import the file.

   The "0 Import Text" News Edit Table now contains the imported text.
5. In the Template Manager, click the Add button to create a new News Edit Table. The Add News Edit Item dialog opens.
6. Enter a number and name for the list in the Add News Edit Item dialog and click the Add button. The new News Edit Table appears in the list. It contains the contents of the "0 Import Text" table.

Rename a News Edit Table

To rename or renumber a News Edit Table, select it in the Template Manager list and click the Rename button.

Delete a News Edit Table

To delete a News Edit Table, select it in the Template Manager and click the Delete button.

Use Tags

In CG, tags are used to label objects. They allow you to give names to objects and to quickly edit and change their content using only News Edit. Tags also allow you to connect objects to data sources and to the Automation Interface application.

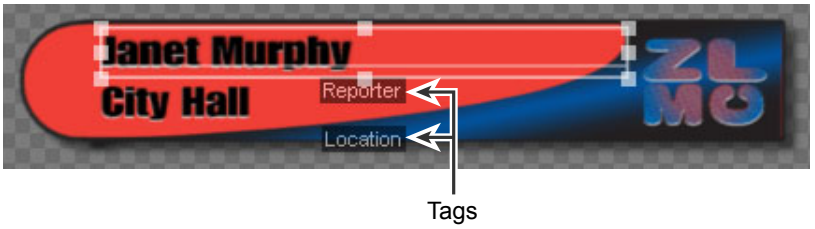


Figure 3-58. Tags Added to Two Text Objects

The tag labels do not appear when you output the layout. They appear in the CG workspace for your reference only.

View/Hide Tag Labels

Use the Display Options menu to show or hide the tag labels in a layout.

1 Click the Display Options button on the CG toolbar. The Display Options menu appears.
2 Select the News Tags option to show tag labels.
3 Clear the News Tags option to hide tag labels.

Add Tags

Tags are added to text objects with either News Edit or the Layout Tree View.

To add tags using News Edit:

1 Select a text or logo object in the CG layout.
2 Click the News Edit button in the CG Editor toolbar. News Edit opens.

3 In News Edit, enter a tag label in the Tags text box and then click Add. The tag is applied to the object.

Note: If you are adding a tag to a logo or clip object, start the tag name with "**image_**". This makes it easier to update your images and video clips using Inscriber MOS.

4 Select another text or logo object in the layout to add another tag. Do not use duplicate tag names in a single layout.

See "Change Object Names" on page 195 to add tags with the Layout Tree View.

Update Tagged Objects

You can update tagged objects using the following methods.

Table 3-27. Tagged Object Update Methods

Method	Description
News Edit Window	Select content items within TitleOne's News Edit window, applying the updated content to the tags you select.
External Data Source	When you edit the content items within an external data source, the associated tagged objects are updated. See "External Data Sources" on page 211.
Overlay Application	You can update tagged objects within the Overlay application. See "Overlay" on page 73.
Automation Interface Application	If you are using Automation Interface, see the Automation Interface User Guide to learn how to create compatible layouts and send updates to tagged layout objects.

Table 3-27. Tagged Object Update Methods (Continued)

Method	Description
Inscriber MOS	With the Inscriber® MOS interface option, Journalists in a newsroom pool can update tagged objects within their newsroom computer system clients. If you are using Inscriber MOS, see the Inscriber MOS User Guide for more information.

Update Objects with News Edit

When objects are tagged you can quickly change their content using only News Edit.

1 Click the News Edit button in the CG Editor toolbar. News Edit opens.

2 Select the tag of the object you want to change in the Tags list.

3 In the Content list, select the content item you want to use. The item appears in the Content field where you can edit it if necessary.

   To add new items to the Content list, type new information into the Content field and click the Add button.

4 Click the Display button. The object updates to display the information in the Content field.

You can also update an object by selecting a tag and double-clicking an item in the Content list.

Image Insertion Commands

Use image insertion commands to apply new image files to layout objects. These commands can be used with all tagged object update methods.

- For logo objects and objects that contain image treatments or Active Texture treatments, enter the full file path to the image you want to apply. For example, **C:\Images\ZXYLogo.tga**.

  If the object already has an image assigned to it, you can use another image file in the same folder by entering a relative file path. For example, **ZXYLogoSmall.tga**.

- If the image file is in the Media Library, reference it by number for logo objects, text objects that contain inserted images, and objects that contain image treatments or Active Texture treatments. The Media Library number follows two number symbols (##).

  For example, if the image is number five in the Media Library, enter **##5**.

- To insert images by file path within text objects, use the ## command, followed by the image path enclosed in double quotes. For example, **##"C:\Images\Flags\Canada.tga" Team Canada**.

- When updating layouts with Automation Interface, you can also specify a new image file path using any command that allows you to modify tag contents within a layout.

Note: Video clips will display as stills if they are applied to logo objects.

Change Tag Label Appearance

Use the News Tag Editor to change the appearance, size, and location of tag labels. Click the Display Options button on the CG toolbar and select Edit News Tags from the drop-down list. The News Tag Editor opens.

Use the controls in the editor to change the color, transparency, size, and location of the tag labels.

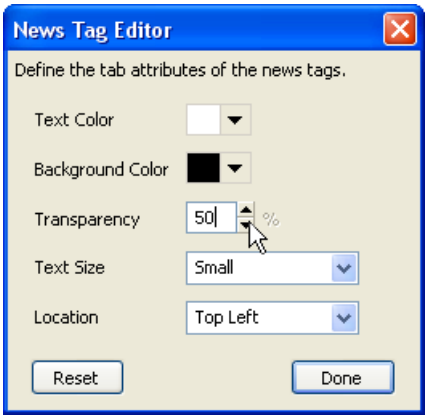


Figure 3-59. The News Tag Editor

External Data Sources

If you purchased the ODBC option, the Open Database Connectivity (ODBC) protocol allows different programs to share information held in database applications.

The ODBC option allows a database to feed information direction into CG. You set up the CG layout with tagged fields and the information from the database flows directly into the layout.

A database can be as simple or as complex as necessary. A single layout can use data from multiple sources. CG connects the databases to the layout so you can display information in any layout you create.

General Workflow

When making a database connection, the steps depend on the type of database and connection you are setting up. The basic workflow is:

1 Create a database to use with CG.

2 Add the database to the system list using the Windows Data Sources option. You can also link a layout directly to a text file without using the ODBC drivers.

3 Create a layout in CG.

4 Use News Edit to tag the text fields for the data and to connect the layout to the database.

5 Format the ODBC data.

6 Save the layout to the network file server and play as needed.

7 Update the database whenever you need to update the displayed data. Data is transferred to the layout as it's loaded into Sequencer, or at set intervals while you are using the file.

Note: Each computer using the layout must have a path set between it and the data source. Use the ODBC Administrator to connect your CG and data source.

Create a Database

You can use any database compatible with the Microsoft ODBC database protocol, including an Excel spreadsheet or a text file, with CG.

If the database uses an MS Office application, you can use external data sources without an MS Office setup on your computer if you install MDAC (Microsoft Data Access Components). With this package you can view, run, and edit a layout but you cannot make modifications to the database.

You must have access to the correct database application to modify the tagged fields within a layout or change the data source. For example, if the database was created using Access 2000, your computer must also use Access 2000.

If the database is on a different system and the database computer is shut down, CG cannot access the database. For best results the database should reside on the same computer that you are using for output.

To create a text file database, see "Create a Text File Database" on page 213.

To create a database with a database application:

1 Using your database application, enter data into the database table.

2 Give the table a name.

- If you are using Excel, complete the following steps:
  - a Highlight all the table data.
  - b Select Insert > Name > Define.
  - c Enter a name for the table.
  - d Click the Add button.
- If you are using Access, assign a name to the table when you create the table.

3 Save the table.

4 Add the database to the ODBC system list. See "Add Database to System List" on page 214.

Create a Text File Database

You can use a text file with the ODBC option rather than using an actual database application. Set up the text file like a database table by adding multiple columns to the file.

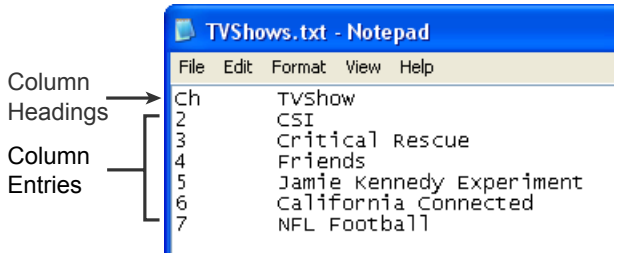


Figure 3-60. A Sample Text File Database

To create a text file database:

1 Open a text editor like Windows Notepad (Start > All Programs > Accessories > Notepad)

2 Enter the first column heading.

3 Press the TAB key and enter the second column heading.

You do not need to use tabs as delimiters between the columns. You can use commas or a custom delimiter. See "Add a Text File to System List" on page 215 for information about how to set up a delimiter.

4 Enter the remaining column headings, using the TAB key to move to the next column.

5 Press ENTER to move to the second line.

6 Add the first entry under the first column heading.

7 Press TAB to move to the second column, and add the column entry.

8 Add the remaining column entries, using the TAB key to move to the next column.

9 Continue adding the column entries in each new line, using the TAB key to move to the next column.

10 Link the text file database to the layout either directly or through the ODBC system list. See "Link Directly to a Text File" on page 219 and "Add a Text File to System List" on page 215.

Add Database to System List

Once a database has been created, add it to the ODBC system list so that CG can read the database content.

Add a Database to System List

To add an Access or Excel database to the system list:

1 In Windows, open the Data Sources (ODBC) option.
   - Windows XP view: Start > Settings > Control Panel > Administrative Tools > Data Sources (ODBC)
   - Windows Classic view: Start > Control Panel> Administrative Tools > Data Sources (ODBC)

2 Select the User DSN tab or the System DSN tab.
   - The User DSN tab registers the database for the current logged-on user. If somebody else logs on to the computer, the database is unavailable.
   - The System DSN tab registers the database in a global location on the computer and is visible for any logged-on user.

3 Click the Add button to open the Create New Data Source dialog.

4 Select the driver from the list for your database.
   - If you are connecting to an Access database select Microsoft Access Driver (*.mdb).
   - If you are connecting to an Excel spreadsheet select Microsoft Excel Driver (*.xls).

5 Click the Finish button to add the selected driver to the system and to continue with the database setup.

6 In the new dialog enter a name for the data source.

7 Select the external data source.
   - For Access data, click the Choose button. In the dialog, navigate to and select the database. Clear the Read Only checkbox if necessary.
   - For Excel data, click the Select Workbook button. In the dialog, navigate to and select the spreadsheet. Clear the Read Only checkbox if necessary.

8 Click OK in all the dialogs until you return to Windows.

9 Create the CG layout that will access the database, as described in "Create a Tagged CG Layout" on page 217

Note: You must connect each computer that runs a layout with ODBC tagged fields to the data source separately. After making this connection, you will not need to go through the procedure again unless the file path to the data source changes.

Add a Text File to System List

Once you set up a text file database, add the file to the ODBC system list so the CG can read the text file content.

Before doing this you must set up a layout with data tags, as described in "Create a Tagged CG Layout" on page 217.

To add a text file to the ODBC system list:

1 Within CG, click the News Edit button on the CG Editor toolbar. News Edit opens.

2 Click the Configure External Data Source button. The Select Text Source dialog opens.

3 Select the Text File radio button and click OK.

4 In the Select Text Access dialog, select Read Data Through ODBC Driver and click OK.

It is also possible to link text files directly to a layout without using the ODBC system list. See "Link Directly to a Text File" on page 219 for more information.

5 In the next dialog click the Browse button and select the text file.

6 Enter a name for the data source in the Data Source Name field.

7 Select the User DSN radio button or the System DSN radio button.

- User DSN registers the database for the current logged-on user. If someone else logs on to the computer, the database is unavailable.
- System DSN registers the database in a global location on the computer. It is visible for any logged-on user.

8 Click Next.

9 In the next dialog select a delimiter (column separator) from the Delimiter list. Tab is the default delimiter but you can select Comma, Fixed Length, or Custom and enter a custom delimiter in the Custom Delimiter field.

10 Select the Column Header checkbox if you want to use the text in the first line of the text file as the database's column headings.

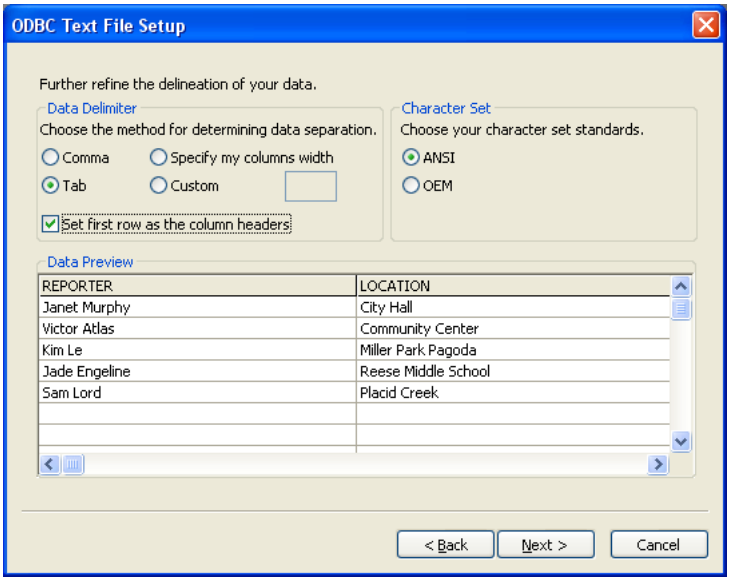


Figure 3-61. A Tab-Delimited Text Source with Column Headings

11 Click Next.

12 The next dialog displays the data type contained in each column of the text file. If you want to change the data type, click a column name and select a new data type from the drop-down list.

13 Click Next.

14 The final dialog displays the text file arranged in a table format. Click the Finish button. Now the text file will be treated just like a table in Access or Excel.

15 Link the table to the CG layout as described in "Link Layout to Database" on page 218.

Create a Tagged CG Layout

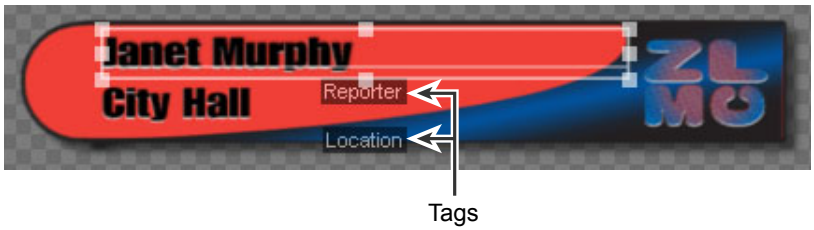
In CG, tags label text objects within a layout. The grey labels in the layout are the tags. You must add tags to the text objects before you can connect them to database tables.

To add a tag to a text object:

1 Select a text line in the CG layout.

2 Click the News Edit button in the CG Editor toolbar. News Edit opens.

3 In News Edit, enter a tag label in the Tags text box and then click Add. The tag is applied to the text line.



See "Use Tags" on page 206 to learn more about tags.

Set Up a Layout with Columns

Layouts that display database text in columns are useful when you want to generate a list of database table entries, like a list of television shows or a team's win/loss record.

If you follow the "row-column" naming convention for the tags in a column, CG will automatically link up all the rows within the column.

Note: To create a layout with multiple rows and columns, the text objects need to contain "placeholder" text. This text is replaced by your database content when you take the layout to air.

First, use text objects to create text placeholders in a table. Create text placeholders for as many rows and columns as you want to display.

Figure 3-62. A Table Containing Placeholder Text

Label each placeholder with a tag using the "row-column" naming convention (1-1, 1-2, 2-1, 2-2, and so on).

Figure 3-63. Tags Added to the Text Objects

When you link the database to the layout as described in "Link Layout to Database" on page 218, you only need to link the sources for the first row of text objects (in this example, just 1-1, 1-2, 1-3, and 1-4). CG automatically links the data for the remaining rows.

Link Layout to Database

To link ODBC sources, text files, and XML files to the tagged layout, click the News Edit button in the CG Editor toolbar, then click the Configure External Data Source button within News Edit. The Select Text Source dialog opens.

Link to ODBC Database

Before linking to an ODBC database you must first add it to the ODBC system list, as described in "Add Database to System List" on page 214.

1 In the Select Text Source dialog select the ODBC option, select the name of the database from the Database list, and select the name of the table from the Table list.

   If you are linking to a text file using ODBC, the name of the database is the data source name you entered when you added the text file to the system list, and the name of the table is the name of the text file.

2 Use the When Data Expires or No Data Available options to set what displays when data is expired or no data is available.

   - Select the Don't Show Item option if you do not want to play tagged text that has expired.
   - Select the Show Custom Message option if you want to display a message when the data has expired. Enter a custom message in the field.

3 Click OK. The Select Database Items window opens. See "Select Table Text for Output" on page 222 to continue selecting your data for output.

Link Directly to a Text File

You can link a layout directly to the content in a text file. Use this procedure to link a layout to a text file that is not set up as a data table. This type of text file does not need to be added to the ODBC system list.

When you link directly to a text file in this way, the text file cannot use tabs to separate text entries, and the data cannot be refined or formatted.

1 In the Select Text Source dialog select the Text File option.

2 Use the When Data Expires or No Data Available options to set what displays when data is expired or no data is available.

   - Select the Don't Show Item option if you do not want to play tagged text that has expired.
   - Select the Show Custom Message option if you want to display a message when the data has expired. Enter a custom message in the field.

3 Click OK. The Select Text Access dialog opens.

4 Select Read Data Directly From the Text File and click OK. A new dialog opens displaying a list of the layout's data tags, allowing you to select a data source for each tag.

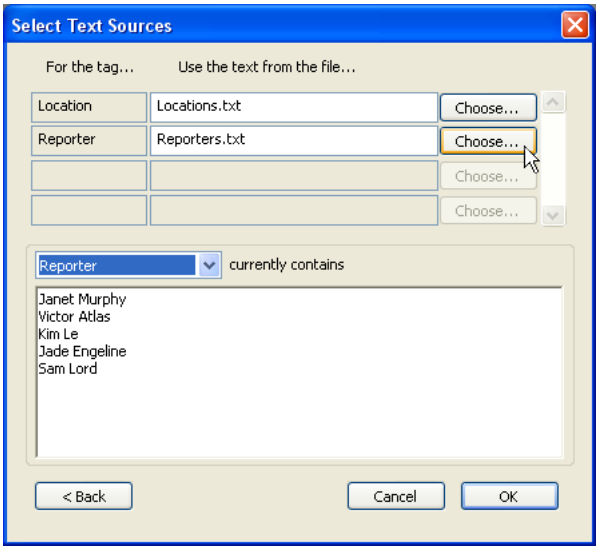


Figure 3-64. Choosing Text Files for Your Layout Tags

If you used the "row-column" tag naming convention as described in "Set Up a Layout with Columns" on page 217, only the tags for the text objects in the first row are displayed. CG automatically selects tags for the other tagged text objects.

5 Click the Choose button for the first data tag. A new dialog opens.

6 In the new dialog, select Local Files Browsing if you want to select a text file on your local computer, or select HTTP/FTP Files Browsing if you want to select a text file from a server using HTTP or FTP.

7 Click OK.

8 If you selected HTTP/FTP Files Browsing, the Internet File Browser dialog opens. Complete the following steps:

a Enter the address of the HTTP or FTP site in the Current Path field (the path must start with HTTP:// or FTP://).

b To log onto the site anonymously, select the Anonymous radio button. Otherwise select the Name radio button and enter a name and a password.

c Click the Go button beside the Current Path field. The contents of the site directory are displayed in the Directory list.

9 Select the text file you want to link to. You are returned to the Select Text Source dialog.

10 Continue to select text files for each data tag.

To preview the content of a text file select a data tag from the drop-down list.

11 Click OK in the dialogs to return to CG. CG outputs the selected text files during playback.

Link to an XML Source

You can link a layout to an XML source. For example, you can link to an RSS data feed which sends the latest updates to the layout.

1 In the Select Text Source dialog, select the XML/RSS option. The XML Data Source Setup dialog opens.

2 Enter a name for the XML source in the Data Source name field and click OK.

3 Use the Select Data Source structure to select the fields from the XML file that you want to display.

a Click the plus signs to expand the file structure in the XML Data Structure section.

b Select a data type that you want to appear in your layout.

c Click the right arrow button to add that data type to the Data Source Structure section.

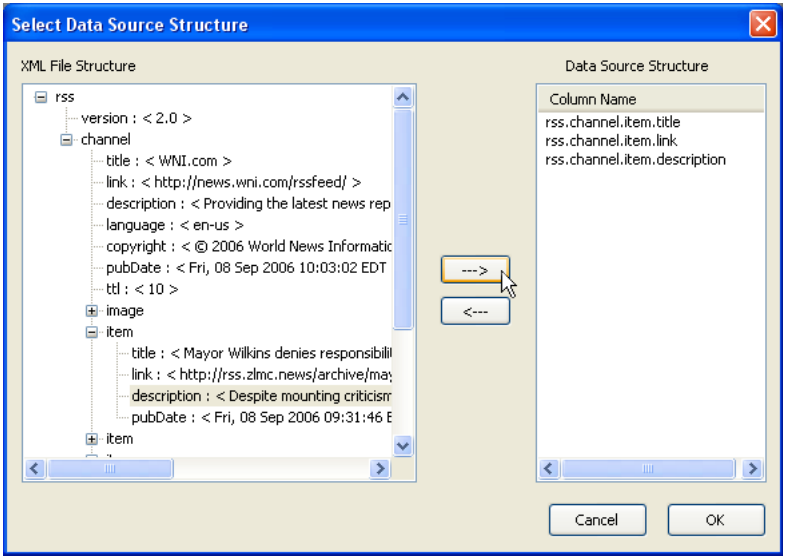


Figure 3-65. Add XML Data Types

4 Click OK. You are returned to the Select Text Source dialog. After a few seconds the Select Database Items window opens. See "Select Table Text for Output" on page 222 to continue selecting data for output.

Select Table Text for Output

Select the table text for output in the Select Database Items window. The Select Database Items window lists the data available in the selected table.

1 In the Select Database Items window, link the data tags to table columns by selecting a column name from the Source Column list. The Source Column list links the selected column information to the tag displayed beside it.

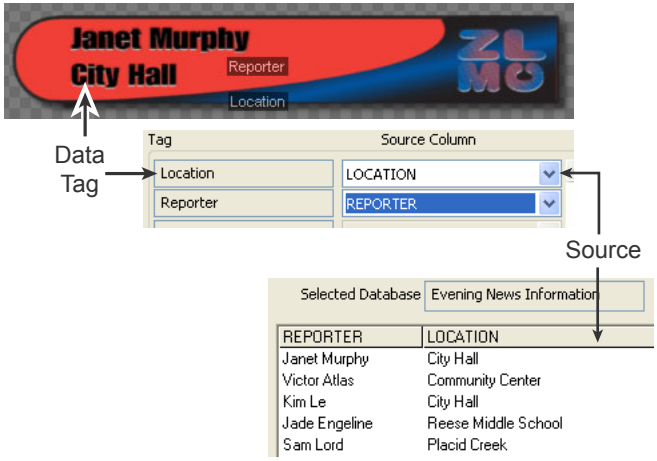


Figure 3-66. Data Tags Linked to Source Columns

2 Select a column from the Sort list to determine which column the ODBC option uses to order the display of information. If you do not select a sort column, the text displays in the order listed in the table.

3 If you want to sort the data, select the ascending or the descending option located beside the Sort list to determine if the selected column is sorted in ascending order or descending order.

- Columns with numerical data are sorted from smallest number to largest (ascending order) or largest number to smallest (descending order).
- Columns with textual data are sorted alphabetically from A to Z (ascending order) or in reverse alphabetical order from Z to A (descending order).

4 Use the Selection Criteria section to set specific table entries for output.

a Select the AND option or the OR option from the first list to help set the playback criteria.

AND: Displays the table entries that meet the criteria set in the current row and the row above. The table entries must have the attributes of both rows.

OR: Displays the table entries that meet the criteria set in either the current row or the row above. The table entries must have at least one of the row's attributes, but not both.

b Select a column heading from the Column list for the selection criteria. The Operator and Value condition applies to the selected column.

For example, if you select "REPORTER" "Equals" "Janet Murphy," the result is any table entries with "Janet Murphy" in the "REPORTER" column.

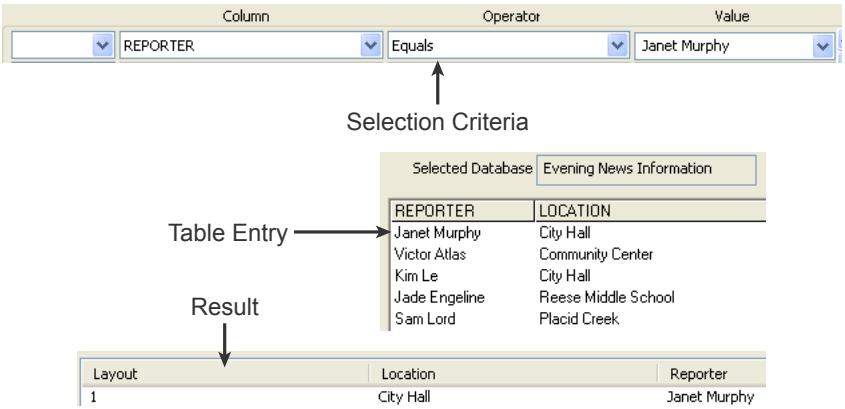


Figure 3-67. Set Specific Table Entries for Playback

c To clear all the information in the Selection Criteria section, click the Clear button.

5 To view the data selected for output, click the Refresh button. The Results area displays the table entries sorted for output.

6 You can customize the SQL statement by clicking the Edit Query button.

7 If you do not want to apply special formatting to specific table entries, click OK on all the dialogs to return to CG. CG outputs the selected table entries from your data source during playback.

If you do want to apply special formatting, see "Format Specific Data" on page 225

Format Specific Data

The Format window allows you to apply special formatting to specific words or numbers in your table.

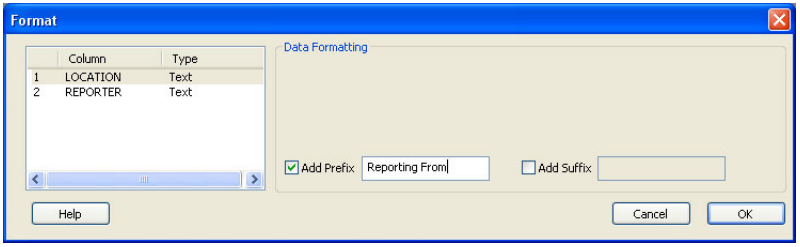


Figure 3-68. Add a Prefix with the Format Window

To start formatting data, click the Advanced Formatting button in the Select Database Items window.

1 Select a column from the Column list to determine which column entries in the database table are formatted. You can apply special formatting to each column if necessary.

- To format numeric data, select an option from the Thousands Separator, Decimal Point, and Decimal Places lists. These options are only visible when your column contains numeric data.
- To format date data, select an option from the Date/Time Format list. This option is only visible when your column contains date data.
- To display a string of text before each column entry during output, select the Add Prefix checkbox and enter the text in the text box.
- To display a string of text after each column entry during output, select the Add Suffix checkbox and enter the text in the text box.

2 Click OK in all the dialogs to return to CG. CG outputs the selected table entries from the data source during playback.

Macros

If you make frequent, standard changes to objects in your layouts, save the changes in one or more macros. Macros record the buttons you press while editing objects in the CG module. By assigning macros to shortcut keys you can quickly repeat these edits on a variety of objects.

To open or close the Macro window, select Tools > Macros.

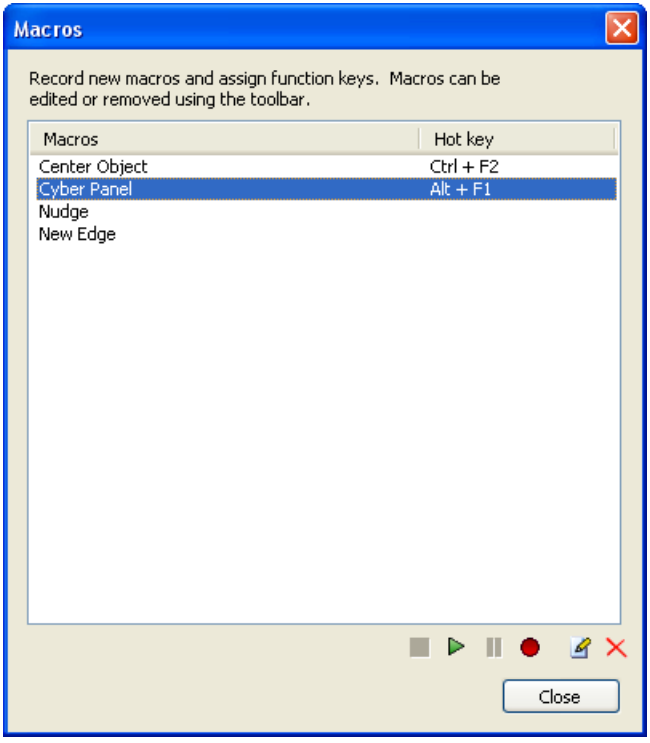


Figure 3-69. The Macro Window

What Macros Can Record

The buttons you press in the CG toolbars are recorded, as well as any shortcut keys and right-click menu selections.

Not everything you do in the CG module can be recorded. Keep the following restrictions in mind when recording a new macro:

- Mouse movements in the CG workspace (such as selecting objects, resizing objects, and moving objects) are not recorded.

- Only changes made to objects within the CG module are recorded.
- If you record a change to an object's treatment options (such as its color and transparency), you can only apply those changes to other objects that use the same type of treatment.

  When changing treatment options in a macro, include a treatment type change in the macro to make sure the object you apply it to uses the same treatment.
- Changes to edges are specific to the object's edge number. If you play them back on an object with fewer edges you may not see the changes.
- Changes to layout display options (such as showing or editing the safe title area) are not recorded.

Record Macro

Click the Record button in the Macro window to start recording a macro. The Macro Control Window opens with options for stopping, pausing, and canceling the recording.

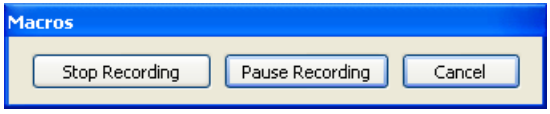


Figure 3-70. The Macro Control Window

Any changes you make to the layout's objects using the CG module's toolbars and right-click menus are recorded.

Pause Recording

Click the Pause Recording button to pause the recording process. This is useful if you do not want certain layout changes to be recorded.

Click the Pause Recording button again to resume recording.

Stop and Save Macro

When you are finished recording the macro click the Stop Recording button. The Record New Macro window opens, allowing you to name the macro and assign a shortcut key to it.

The shortcut key can be any available function key from F1 to F12, combined with the CTRL, SHIFT, or ALT keys.

If you do not want to assign a shortcut key to the macro select the None radio button. Otherwise select the Function Key radio button, select a function key from the drop-down list, and select the checkboxes for the CTRL, SHIFT, or ALT keys.

Click OK when you have finished setting the macro name and shortcut key.

Note: Some key combinations are already used by CG or by Windows. If the shortcut key you select is reserved you are prompted to select a different key combination when you click the OK button.

Edit Macro

To edit a macro's name or shortcut key, select the macro in the Macro window and click the Edit button. A dialog opens allowing you to edit the macro.

Play Macro

Once saved, macros are available in the Macro window's list. To play back a macro select it in the list and click the Play button. The macro's actions are applied to any selected objects in the CG layout.

You can also play a macro by pressing the shortcut key assigned to it.

Delete Macro

To delete a macro, select it in the Macro window and press the Delete button.

Manage Layouts

CG layouts can be created from scratch or they can be based on pre-made templates that you create and store in one or more template registries. Layouts can also be exported and imported in a variety of layout formats.

Layout Materials

Your layouts and templates reference image files for backgrounds, logos, textures, and graphic objects. Since CG uses absolute file paths, moving layouts or templates between computers is problematic because the file paths may change.

For instance, if a layout references image files stored at D:\Images\Sports, and the layout and its image files are moved to another computer, the image files must be stored at D:\Images\Sports on the new computer as well.

If CG is unable to find image files in the referenced location, it will search for the same files within the application's Samples subfolder. If the files are not in that location then CG will be unable to load the images.

Follow these steps if CG is unable to load the image files for a template or layout.

1 With the layout loaded into CG, select File > Utilities > Verify Materials. CG performs a more thorough search for the missing image files.

During this search, CG looks in and around the folders specified by the Search Order and Materials Path settings. See "Project Tab" on page 514 to learn how to change these settings.

2 If the image files are not found, you can move the files to a subfolder within the Materials Path and select File > Utilities > Verify Materials again.

3 If CG is still unable to automatically find the image files, or if you do not wish to move your image files, manually edit your layout objects to reference the image files at their new locations.

Note: Be sure to save your layout or update your template once the file references are corrected.

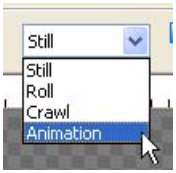
Create Layouts

To create a new layout within the current playlist, press the Add Default Event button at

the bottom of the Playlist. The CG workspace shows the new layout.

To quickly format the layout using a pre-defined template, select a template from the Template drop-down list in the CG toolbar. See "Templates" on page 231 for more information.

You can create four types of layouts within CG: stills, rolls, crawls, or animations. To change the type of the selected layout, select a type from the Title Type drop-down list in the CG toolbar.



Still Layouts

Still layouts are static screen images that contain text and graphic objects on top of a background. Some common types of still layouts are lower thirds, corner logos, and full screen layouts.

Roll Layouts

Rolls scroll text and graphic objects up or down the screen. Generally, rolls are used for credit sequences and consist of multiple vertical pages of text.

After you have selected the Roll title type and added some text to the layout, a vertical scrollbar appears on the edge of the CG workspace. Use the scrollbar to move up and down the layout. As you add more text to the layout the vertical size of the layout increases.

See "Prevent Objects from Rolling or Crawling" on page 190 to learn how to keep objects motionless in a roll layout.

Multiple roll layouts can be combined into a single multi-page roll using the Sequencer module. See "Create Multi-Page Rolls" on page 317.

Note: If you import text for a roll layout, the imported text must not exceed 40 pages.

Crawl Layouts

Crawls display a running line of text, such as an announcement or a warning, across the screen. Crawls are not limited to a single line of text and can be placed anywhere on the layout.

After you have selected the Crawl title type and added some text to the layout, a horizontal scrollbar appears on the bottom of the CG workspace.

Use the scrollbar to move left and right within the layout. As you add more text to the layout the horizontal size of the layout increases.

See "Prevent Objects from Rolling or Crawling" on page 190 to learn how to keep objects motionless in a crawl layout.

Multiple crawl layouts can be combined into a single multi-page crawl using the Sequencer module. See "Create Multi-Page Crawls" on page 319.

Note: If you import text for a crawl layout, the imported text must not exceed 40 pages.

Animation Layouts

Animation layouts allow you to turn a CG layout into an animation using the FX module. Once you've created the layout, switch to the Animation Editor and add animation effects. See "Animation" on page 247 for details on animating layouts.

Templates

Every layout in CG is based on a template. Templates let you define standard, commonly used layouts for projects. They contain anything you put in a layout, from lower third definitions to complex full screen layouts using logos and other graphic objects. They can also contain Style Library and Media Library information.

If you define all the media, styles, text objects, and graphic objects you need for a project in advance and save them as a template, you can ensure that layouts created with the template use exactly the same colors and formats.

When you create a new layout, CG uses the first template in the current template registry to format the layout. By default this layout (called "0 Default layout") is blank, with a small selection of styles and media library objects.

You can use more than one template registry within CG. For information about template registries see "Template Registries" on page 234.

Select a Template

To select a template for a layout, click the Template drop-down list in the CG toolbar. A list of all the templates in the current template registry

appears. Hover your mouse over the template names to display a thumbnail for each template.

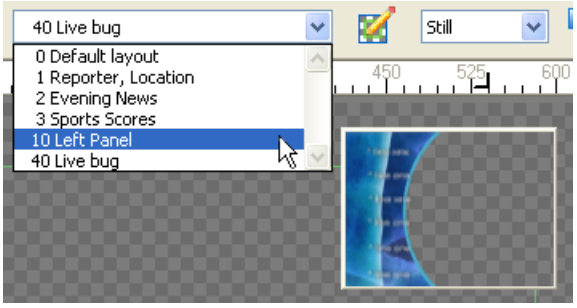


Figure 3-71. Select a Template from the Template Drop-Down List

Click a template name to load the template into the layout. Modifying a layout does not modify the template that the layout was based on.

The Template drop-down list can also be opened by pressing the CTRL+R key.

Create a Template from a Layout

Use the Template Manager to add your own layouts to the current template registry.

1 Open the layout in CG.

2 Open the Template Manager by clicking the Template Manager button in the CG toolbar.

You can also open the Template Manager by choosing File > Template Manager > CG Layouts or by pressing the CTRL+SHIFT+R key.

3 Click the Add button to add the current layout to the Template Manager. The Add dialog opens.

4 In the Add dialog, number the template and include a name or description. When numbering the template make sure you do not overwrite other templates by using an existing number.

5 Click the Add button to close the Add dialog. The new template is added to the template list.

6 Click the Close button to close the Template Manager.

Update a Template

If you want to replace an existing template with an updated layout:

1 Open the updated layout in CG.

2 Open the Template Manager by clicking the Template Manager button in the CG toolbar.

3 Select the template you want to update.

4 Click the Update button. The current layout information replaces the selected template.

Manage Templates

Use the Template Manager to keep the templates organized in the registry.

In the Template Manager dialog:

- Click the Delete button to delete the selected template.
- Click the Rename button to rename or renumber the selected template.
- Add a text memo to a template by selecting it and entering a note in the Memo field.

Create Playlists with the Template Manager

The Template Manager allows you to build an entire playlist using either the keyboard or the mouse.

You can immediately select a template by typing its number in the Template Manager's Quick Pick field. The corresponding thumbnail is highlighted immediately, and the template is selected.

You can load an event in three ways using the Template Manager:

- Click the Load button to load the selected template into the current playlist event. You can also press ENTER or ALT+L.
- Click the Load Down button to load the selected template into the next available playlist event. You can also press SHIFT+ENTER or ALT+W.
- Click the Load More button to load the selected template into the next available playlist event, and then keep the Template Manager open so you can continue selecting and loading templates. You can also press CTRL+SHIFT+ENTER or ALT+E.

Select a Different Template Registry

To change the current template registry, click the Open button in the Template Manager and navigate to the .templates file you want to use. The drop-down list at the top of the Template Manager window stores the recent registry files for easy access.

Template Registries

CG has a default template list, or registry file, called inscribe.templates. This file is located in your TitleOne application folder. You can use more than one registry file when working with CG.

The Registry Manager is a utility that helps you organize registry files. It allows you to create new registries, manage existing registries, and copy templates between registries.

Open the Registry Manager

To open the Registry Manager, first open the Template Manager window by pressing the Template Manager button in the CG toolbar, then click the Registry Manager button in the Template Manager window. The Registry Manager opens.

The left and right sides of the Registry Manager allow you to open two different registry files simultaneously. The current registry's templates are automatically loaded into the left side of the window.

To view a preview of a template, click a template in one of the lists. It is displayed in a thumbnail at the bottom of the screen.

Create a New Registry File

Select File > New to create a new blank registry file. A .templates file is created in the folder you specify, and the registry is automatically loaded into the right side of the Registry Manager.

Open a Registry File

You can open a registry file into either the left side or the right side of the Registry Manager window.

Click the Open button above the list you want to use and navigate to the .templates file. The file's templates are loaded into the list. The drop-down list at the top of the list stores the recent registry files for easy access.

Copy Templates Between Registries

You can copy templates from either the left or right lists using the Copy Left and Copy Right button.

1 Make sure you have both the source and the target lists opened in the left and right sides of the Registry Manager window.

2 From the source list, select the templates you want to copy. Hold the SHIFT key while clicking to select multiple consecutive templates in the list, and hold the CTRL key while clicking to select multiple non-consecutive templates.

3 To copy the templates from one list to another, use one of these methods:

- Drag the selected templates into the other list.
- Press the Copy Left or Copy Right button to copy the templates to the other list.

Copy Options

If you are copying over templates with the same number, the Copy Options dialog automatically opens. You can also set copy options by clicking the Copy Options button in the Registry Manager.

Specify the way you want the templates renumbered in the target list:

- Renumber Item Coming from Source Database. Select this option to assign the first available number to the source list's template.
- Renumber Item in Target Database. Select this option to assign the first available number to the target list's template.
- Write Over Target Database Item. Select this option to delete the template in the target list before copying.
- Skip. Select this option if you are copying a group of items and you do not want to copy templates with duplicate numbers.

You can also set Prompt Options:

- Prompt Before Renumbering or Replacing. Select this option to have the Copy Options dialog open every time you copy a template.
- Automatically Renumber or Replace. Select this option if you always want templates copied with the chosen copy option. You can change the

copy options in the future by clicking on the Copy Options button in the Registry Manager.

Move Templates

Select Move > Right to Left or Move > Left to Right to move selected templates from one list to another.

Manage Templates

Use the Registry Manager to delete, rename, and renumber templates.

- Press the Delete button to delete the templates selected in a list.
- Press the Rename button to rename and renumber the templates selected in a list.

Back Up Template Registries

If you want to keep a backup copy of a template registry, use Windows Explorer to duplicate the .templates file you want to backup.

The Job Creator

You can import a formatted text file into CG that automatically creates a multi-layout playlist using available templates. The text file contains formatting information that tells CG to use specific template numbers, and contains tagged text that replaces the default template text when the playlist is created.

See "Use Tags" on page 206 for more information about tagging the objects in your layouts.

Creating a playlist using a text file consists of two steps:

1 Creating a formatted text file.

2 Importing the text into CG

For this example we will create a playlist containing three layouts. All three layouts will be based on a template that contains the text tags "Reporter" and "Location." This template is #10 in our example template list.

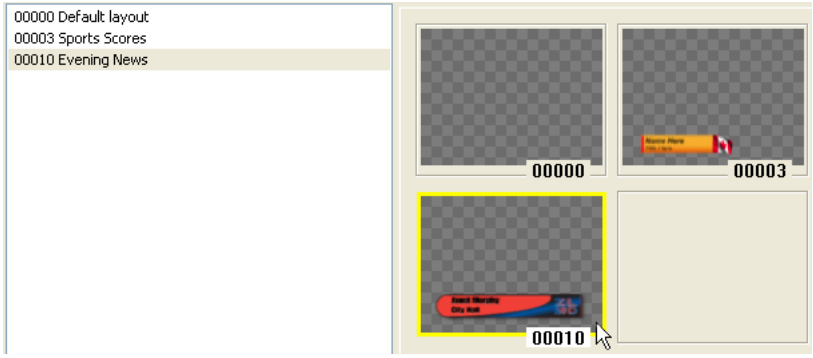


Figure 3-72. Template #10 in the Template Manager

Create a Formatted Text File

1 Open a text editor, like Windows Notepad.

2 On the first line enter "template=" and the number of the template you want to use, for example:

template=10

You can use the Template Manager within CG to verify the template number.

3 On the second line enter the tag you want to fill, followed by an equals sign and the text you want to fill it with. For example:

Reporter=Janet Murphy

4 Repeat step 3 on subsequent lines for any more tags you want to fill in the layout. For example:

Location=City Hall

5 To create another layout, press ENTER twice and then enter the template number, tags, and replacement text again.

6 Repeat step 5 to create more layouts. Make sure all the layouts have spaces between their entries. This is what the finished text file looks like in our example:

```
template=10
Reporter=Janet Murphy
Location=City Hall

template=10
Reporter=Victor Atlas
Location=Community Center

template=10
Reporter=Kim Le
Location=Miller Park Pagoda
```

7 Save the text file.

Import the Formatted Text File

In CG, select File > Import > Import Text File and navigate to the folder where you saved the formatted text file. Select the text file and select the Job Creator radio button at the bottom of the Open dialog.

When you click the Open button, CG creates the playlist based on the instructions in the text file. The templates are loaded and their tags are filled as specified.

Event Names

You can specify names for your layouts by adding "eventname=" lines to your text file. This example gives each layout a specific number for its name:

```
template=10
eventname=20
Reporter=Janet Murphy
Location=City Hall

template=10
eventname=30
Reporter=Victor Atlas
Location=Community Center

template=10
Reporter=Kim Le
Location=Miller Park Pagoda
```

template=10
Reporter=Janet Murphy
Location=Community Center

When a number is specified, the layout is created with that number. In the above example the first layout is named "20" and the second is named "30".

If a new layout doesn't have an event name, and it follows a layout with a specific number, the new layout's number automatically follows from the proceeding layout's number. In the above example the third layout is named "3I" and the fourth is named "32".

You can also give alphanumeric names to layouts. The following example creates a layout called "sports".

template=10
eventname=sports
Reporter=Janet Murphy
Location=Recreation Center

The Video Safe Title Area

By default the video safe title area is the center 80% of the layout area. Within this area, text and graphics will be displayed on any standard TV monitor. Outside of this area some monitors may cut off some or all of the layout. The video safe title area is a useful reference when you want to be sure that your layout will be properly displayed on all types of TV monitors.

To display the video safe title area, click the Display Options button on the CG toolbar. In the Display Options menu, select Show 4:3 Title Safe Area. If you are working on a I6:9 layout you can choose to display either a 4:3 or a I6:9 video safe title area.

If the Snap to Title Safe Area option is checked in the Display Options menu, objects in your layout snap to the video safe title area when they are moved.

Edit the Video Safe Title Area

Select Display Options > Edit Video Safe Area to change the size and color of the video safe title area.

The Video Safe Area Editor dialog opens, allowing you to change the color and size of both the 4:3 and 16:9 safe title area.

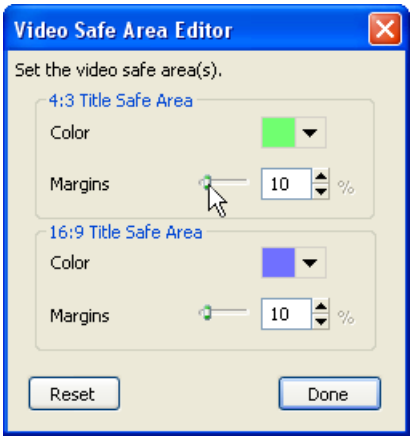


Figure 3-73. Video Safe Area Editor

Work with Layout Files

CG lets you import text files, News Edit tables, Subtitle .ebu files, .scribe files, and animations. You can also export images, sequence text files, subtitle text files, .scribe files, and Subtitle .ebu files.

All the import and export options are found in the File > Import and File > Export menus.

Import and Export CG Layouts

CG Layouts are .scribe files which contain editable layout information, ODBC connections, and transitions. They save a referenced file path to any media and fonts used in the layout, and they also save animation data.

To export a layout as a .scribe file, select File > Export > Export CG Layout.

Import Text Files

Text files are imported into the selected line at the current cursor position. CG understands end of line markers, unless you are importing text into a crawl layout.

Imported text files must be in plain text format (ASCII, ANSI, MS-DOS text, etc.)

Subtitles

CG creates subtitles by importing text files using one of three file formats: subtitle-only, timecoded subtitles, and EBU format. You can also use the CG subtitle features to do versioning.

Subtitle File Types

You can use three different subtitle file types in CG.

Table 3-28. Subtitle File Types

File Type	Description
Subtitle-Only	A text file containing subtitle text only. A blank line separates each subtitle page.
Timecoded Subtitles	A text file containing subtitle text and timecode information. Time in and out codes separate each subtitle page.
EBU Format	A text file containing subtitles and timecode using standard EBU NI9 formatting conventions.

Prepare Subtitle-Only Files

Use any text editor or word processor to create a subtitle-only file. Save the file as DOS/ASCII or plain text. These files have a .txt extension.

To create a subtitle-only file, enter the text in a text editor. You can put as many lines of text on each page of subtitles as you require. Use a blank line to separate the subtitle pages. CG starts a new layout in the playlist whenever it encounters a blank line.

The following example sets up three pages of subtitles. The first page will have one line of text while the second and third will have two lines of text.

> Richards comments on her Italian travels.
>
> "Every trip is a memorable one! Of course you
> can't have all the comforts when you're on the road...
>
> but the fans are so enthusiastic. And that
> means a lot when you're far away from home."

When CG imports the text it begins to fill the layout from the bottom up, so single line subtitles are placed on the bottom line of the layout.

As an alternative to dividing the text into lines you can enter each page of subtitles into one long line of text. Use the Lock the Object Width and Enable Word Wrapping text object properties to break each page into text lines. You still need to signal new layout pages with blank lines in your text file.

Timecoded Text Files

You can import text files that contain both subtitles and timecodes. These files are the same as subtitle-only files except that each subtitle page is separated by in and out time codes.

The following example shows three pages of subtitles:

> Richards comments on her Italian travels. <00:37:27:02> <00:37:30:14>
>
> "Every trip is a memorable one! Of course you can't have all the comforts when you're on the road... <00:37:43:01> <00:37:46:22>
>
> but the fans are so enthusiastic. And that means a lot when you're far away from home." <00:37:50:22> <00:37:53:09>

Timecodes use the following format: <hours:minutes:seconds:frames>. The opening and closing angle brackets are required. The timecodes represent the actual times that the subtitles appear in the video. When you import the subtitles into CG, it converts the timecodes into the following components: time in, duration, wait, and time out.

EBU Subtitle Files

CG supports the EBU file format for subtitles with non-overlapping timecode. CG ignores any other elements of the EBU specification. When creating EBU-based subtitle files, make sure that the editor follows EBU guidelines.

Design a Layout Template

When you import subtitles into a playlist, CG uses a fresh copy of the current template for each subtitle page. You probably want to design a custom template for subtitle projects. For example, you may want to have two lines of centered text at the bottom of each page.

When designing a template, make sure that there are enough blank lines to handle each subtitle page in the imported text file. Otherwise some of the imported text may not appear on screen.

To save a template in the Template Manager:

1 Open the Template Manager by clicking the Template Manger button in the CG toolbar.

You can also open the Template Manager by choosing File > Template Manager > CG Layouts or by pressing the CTRL+SHIFT+R key.

2 Click the Add button to add the current layout to the Template Manager. The Add dialog opens.

3 In the Add dialog, number the template and include a name or description. When numbering the template make sure you do not overwrite other templates by using an existing number.

4 Click the Add button to close the Add dialog. Your new template is added to the template list.

5 Click the Close button to close the Template Manager.

To access the new subtitle template click the Template drop-down list in the CG toolbar. Click the template in the drop-down list to load it into the CG workspace.

Import a Subtitle File

Before you import a subtitle file, make sure you select the subtitle layout template from the Template drop-down list in the CG toolbar.

1 Choose to import the subtitle file.

- To import a text-based subtitle file, select File > Import > Import Text File. In the Open dialog select the Subtitle Format radio button.

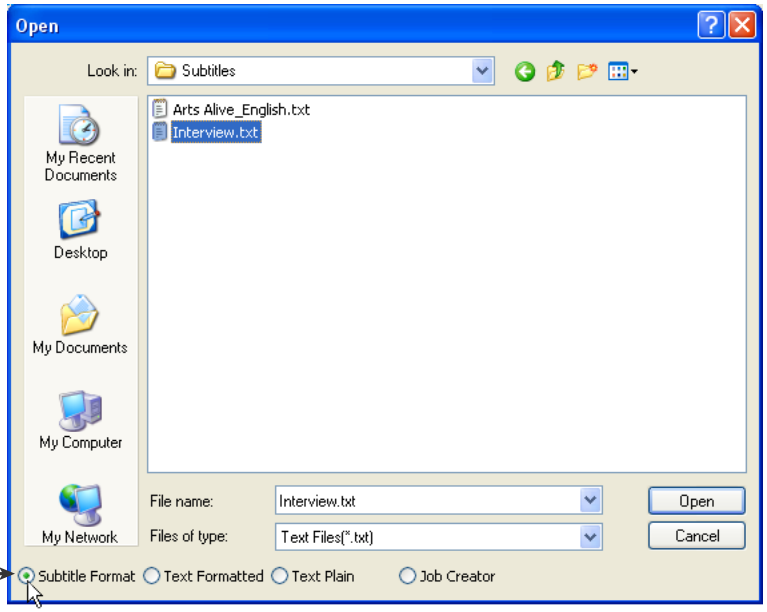
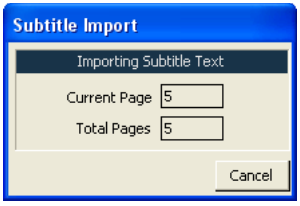


Figure 3-74. Import a Text-Based Subtitle File

- To import an EBU-based subtitle file select File > Import > Import EBU Subtitle File.

2 Locate and select the file containing the subtitles.

3 Click Open to import the text file. The Subtitle Import dialog appears. After the text import process is complete, save the playlist by choosing File > Save.



Set the Timing Values

When you import a timecoded or EBU-formatted file, CG automatically converts the timecodes into a format that it can use. The timecodes for each subtitle get converted into the following timing components: time in, duration, wait, and time out. You can take these subtitles to video without any modification or editing.

If you need to view or modify the timing components, use the Sequencer module. See "Event Duration" on page 334.

Versioning

CG includes an option to export subtitles and timecodes to a text file. You can edit the file and import it back into CG. This feature is useful when creating multiple versions of a video, each in a different language.

For example, suppose you want to subtitle a video in English, French, and Spanish:

1 Import a subtitle-only file containing subtitles in the original language into CG, as described in "Import a Subtitle File" on page 243.

2 Using the Sequencer module and a timecode source, add time codes to the subtitles. Take the job to video to make sure that all the subtitles are timecoded correctly. Remember that a translator will be using the subtitles as source material. Make sure the subtitles are of an appropriate length for translating.

3 Select File > Export > Export Subtitle Text File and export the subtitles. The exported file is in the timecoded subtitle format, similar to the following:

> Richards comments on her Italian travels. <00:37:27:02> <00:37:30:14>
>
> “Every trip is a memorable one! Of course you can’t have all the comforts when you’re on the road... <00:37:43:01> <00:37:46:22>
>
> but the fans are so enthusiastic. And that means a lot when you’re far away from home.” <00:37:50:22> <00:37:53:09>

4 Give the file to a translator who will translate the subtitles into a different language. The translator can edit the file using any ASCII text editor. When editing, the translator replaces the original text with the translated text, leaving the timecodes as they are. You can reuse the existing timecodes for each translation.

5 The translator saves the file in an ASCII DOS or TEXT format and returns it to the studio.

6 Import the translated file into CG as described in "Import a Subtitle File" on page 243. A new playlist is created using the translated text and the timecodes in the text file.

Chapter 4

Animation

Animate your CG objects in the Animation Editor.

Introduction to Animation Editor

Animation Editor is a special module that enhances the functionality of CG to include animation creation and playback. Animation Editor takes the two-dimensional (2D) text and graphics created in CG Editor, and 'animates' them by flying them in virtual three-dimensional (3D) space.

Switch to Animation Editor

You can easily switch between modules using the buttons on the toolbar or the options from the Tools drop-down menu.

To switch to Animation Editor, use one of the following methods.

- On the toolbar, click the FX button.
- Select Tools > Animation Editor.
- Press SHIFT+F6 on the main keyboard.

In order to access the Animation settings, you must set the layout type to Animation before switching to Animation Editor. From the Layout Type drop-down list on the CG toolbar, select Animation.

If you click directly on the FX button on the main toolbar, without setting the layout type to Animation, TitleOne will confirm that you want to convert the layout to an animation. If you select yes, the program switches to the Animation Editor module and you are not given the chance to change the transition settings. However, you can switch back to CG Editor at any time to change the transition settings. See "Animation Settings" on page 259 for details.

Interface Overview

All Inscriber animations are based on CG layouts. Create a layout in CG Editor, then switch to Animation Editor to set up motion paths.

The Animation Editor interface has the following components:

- FX Workspace
- Preview Toolbar
- Attributes Tabs
- FX Palette
- Right-click Menu
- Preview/Program Palette

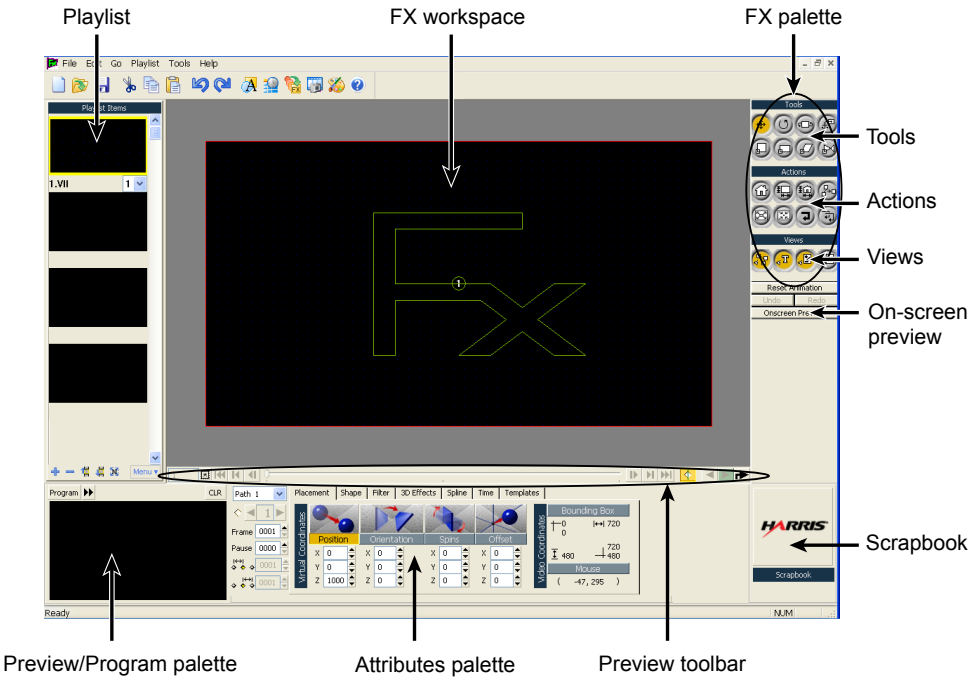


Figure 4-75. Animation Editor Interface

FX Workspace

The FX Workspace is the work area where you can set up motion paths based on the text and objects created in CG Editor. This workspace can display every motion path in an animation at once, so it's easy to set up parallel keyframe positions and timing. The special drag-and-drop functionality of Animation Editor lets you position objects anywhere on screen using only the mouse.

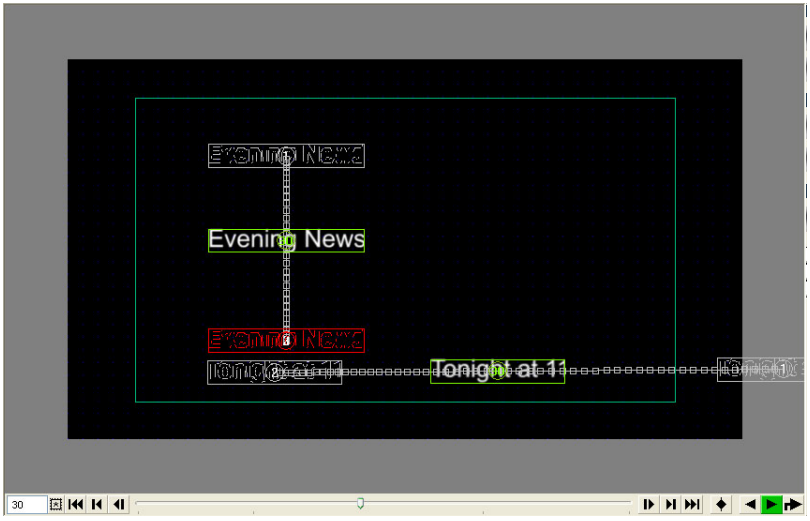


Figure 4-76. FX Workspace

Preview Toolbar

The Preview toolbar, also called the Scrubber, is located on the bottom of the FX workspace. This toolbar allows you to preview the animation in wireframe mode, without rendering and saving. With the toolbar, you can preview the whole animation or preview from the current frame in time. The toolbar includes a Time Slider that allows you to scroll (or scrub) through time in Animation Editor. See "Preview Motion Paths" on page 270 for details.

Figure 4-77. Preview Toolbar

Attributes Palette

Many of the main key controls in Animation Editor are located on tabbed pages. The tabs are Placement, Shape, Filter, 3D Effects, Spline, Time, and Templates. To switch between tabbed pages, click the tab name. Animation Editor brings the contents of the tab you clicked on to the front of the display.

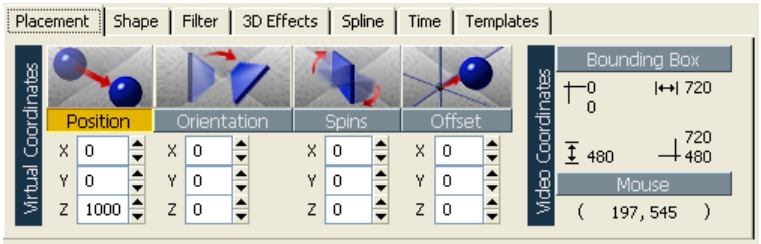


Figure 4-78. Animation Attributes Tabs

Table 4-29. Animation Attributes Tabs

Tab	Description
Placement	Contains the options to adjust the keyframe behavior on a particular axis such as; Position, Orientation, Spins, and Offset.
Shape	Extend, Skew, and Scale the shape of a keyframe in this tab.
Filter	Apply special effects to the keyframe with Transparency, Crop, Mosaic, Luminance, and Tint.
3D Effects	Contains pre-defined motion effects such as; Squish, Flop, Peels/Curls, Blinds, Twist, Shatter, Ripple, Torus, and Blackhole.
Spline	Controls how an object moves from one keyframe to the next.
Time	Adjusts the time between keyframes, the path length, and the start and end frames of a path.
Templates	Contains pre-set effects for your animation paths, including Placement, Shape, Filters, 3D Effects, and Timing information.

FX Palette

The FX palette is divided into three parts: tools, actions, and views. The Tools palette is a duplicate of the tools on the Placement and Shape Attributes tabs and provides fast access to these tools.

Figure 4-79. FX Palette

Action options can only be accessed from this palette. Action options are advanced functions that reset your paths or keyframes back to their former state. These options include reset shape, reset keyframe, reset object, and reset placement, as well as options to reverse the direction of the current path or all paths.

View options change how paths are displayed in Animation Editor. You can limit the paths that appear, or switch from rendered bitmap to wireframe view. See "Display Options" on page 267 for details.

FX Palette Tools

Table 4-30. FX Palette Tools

Icon	Name	Icon	Name
Tools			
	Move (Position)		Rotate (Orientation)
	Spin		Offset
	Scale		Extend
	Skew		Twist
Actions			
	Reset Placement		Reset Shape
	Reset Keyframe		Reset Object
	Full Frame		To Infinity
	Reverse Path		Reverse All Paths
Views			
	Display All Paths		Display Text Outlines
	Snapshot of All Objects		Snapshot of Current Object

Right-Click Menu

You can access the Tools options by positioning the cursor anywhere over the FX workspace and pressing the right mouse button.

This menu contains the Tools available on the FX palette. You can also use this menu to copy, cut, paste, and perform certain keyframe actions. A checkmark indicates which tool is currently active.

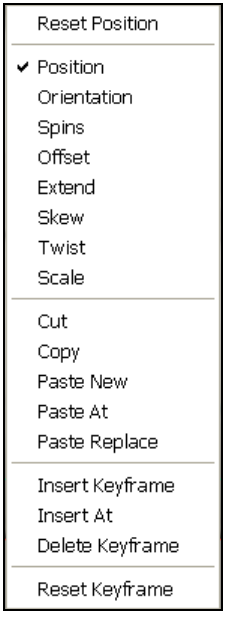


Figure 4-80. Animation Right-Click Menu

Program/Preview Palette

The Program/Preview palette allows you to view contents on the Preview and Program channels. The Preview channel is the video channel used to preview video before you send it to the Program channel. The Program channel is the video channel used to broadcast or send to tape.

Animation Concepts

The basic idea behind Animation is to change the way text and objects appear over time. You start with the still text and graphic objects created in CG Editor, then switch to Animation Editor to set up the objects in various stages of change over a particular duration. In Animation, simply make duplicate copies of the text and graphic objects (called keyframes), then create changes in motion, color, movement, or transparency at each keyframe. When you play back this sequence of keyframes, the text and objects change gradually as they move through each keyframe along the motion path.

Create an Animation

All animations are based on CG layouts. The following procedure shows how to create a basic animation. Detailed information on how to use Animation Editor is covered throughout this chapter.

1 Create and format your text and objects in CG.

2 Select Animation from the Layout Type drop-down list in CG.

3 Click the Effect Settings button on the toolbar to open the Transition Settings dialog and select how you want the layers to pass to Animation.

4 Click on the Animation button on the main toolbar.

5 Select an object or line of text in the FX workspace, and press INSERT to add a new keyframe.

Add as many keyframes as you want for each object.

6 Select the Move tool from the FX Palette, and then drag and drop the keyframe(s) anywhere on the screen.

7 Use the options in the Position, Shape, and Filter tabs to change how the object appears over time.

8 Use the options in the Time and Spline to adjust the timing and smoothness of each path.

9 Select Go > Render Animation.

10 Go online to make the animation fly.

Understand Spline Paths

Motion is created when an object moves through a series of points along a path. This path is called the spline. The significant events that make up the points along which the object moves, such as the start and end points, are called keyframes. Every object moves smoothly between keyframes along a particular path. The transitional values Animation generates to get from one keyframe to the next are called frames. The spline path is made up of both keyframes and frames.

To create a path, you need to define both a starting keyframe and an ending keyframe, as well as any points of change in between. See "Keyframes" on page 261 for details.

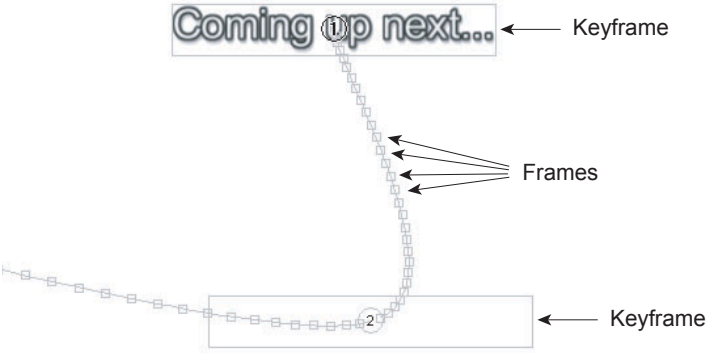


Figure 4-81. Animation Spline Path

Time vs. Space

An animation is created by changing objects over time. The series of still frames becomes 'animated' as changes are made throughout the timeline. In the FX workspace you can see every moment in time for the animation. This is important for aligning objects at a particular point in time.

A track view of the timeline is presented on the Time tab. This view is useful for changing the length of the spline path, or shifting the entire timeline forward or backward without working with individual keyframes. See

"Motion Timeline" on page 286 for details on setting the timing for each animation path.

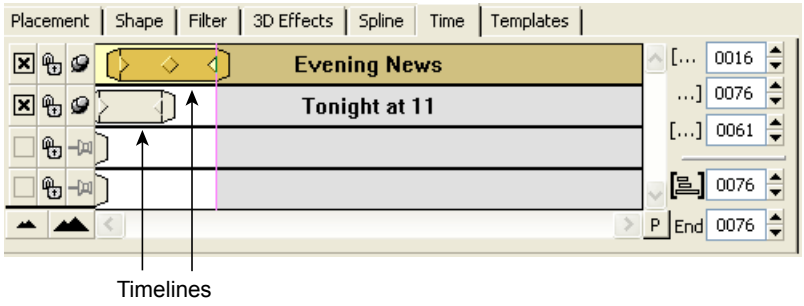


Figure 4-82. Animation Path Timelines

From 2D to 3D

In CG Editor, only two dimensions come into play: height and width. These dimensions are represented by the X axis and the Y axis; all the text and graphic objects created in CG are flat two-dimensional objects. You enter another dimension when you switch to Animation. The text and graphics that were once only two-dimensional now operate in a 3D space. This third axis, called the Z axis, represents the depth of your text and graphics in the workspace. In Animation, all objects, even objects that have only height and width, exist in this 3D space.

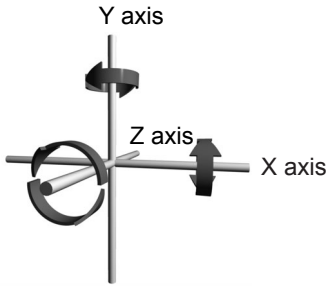


Figure 4-83. XYZ Axes

Select a Tool

Animation Tools are Position, Orientation (Rotate), Spins, Offset, Extend, Skew, Twist, and Scale. Select a tool in any of the following ways:

- Click the tool on the FX palette.
- Click the tool on the Placement or Shape Attributes tabs.
- Right-click the FX workspace and select a tool from the menu.

When you select a tool, the cursor changes to reflect which tool is active.

Table 4-31. Animation Tools

Icon	Name	Icon	Name
	Position (Move)		Orientation (Rotate)
	Offset		Spins
	Extend		Twist
	Skew		Scale

Apply a Tool

Whether you select a tool from the right-click menu, FX palette, or Attributes tabs, you apply a tool in the same way:

1 Select the tool you want to use.

2 Click the keyframe you want to change and drag to adjust the keyframe.

3 Hold down the I, 2, or 3 keys while dragging to constrain the change to a particular axis.

- Press I while dragging to constrain the X axis.
- Press 2 while dragging to constrain the Y axis.
- Press 3 while dragging to constrain the Z axis.

Animation Settings

When your CG layout is complete and you are ready to create motion paths, you need to define your layout as an animation, and then switch to Animation Editor. You also need to decide how Animation Editor must deal with each object and each object in your layout.

Transition Settings

Once you create the text and graphic objects in CG, they are sent to Animation Editor with all formatting and style information intact. Before switching to Animation Editor, you need to decide whether you want to animate objects and characters individually or as a group.

To select animation options for each object in your layout:

1 Click the Effect Settings button on the toolbar to open the Transition Settings dialog.

2 Select either Export as a single group object or Send as individual object.

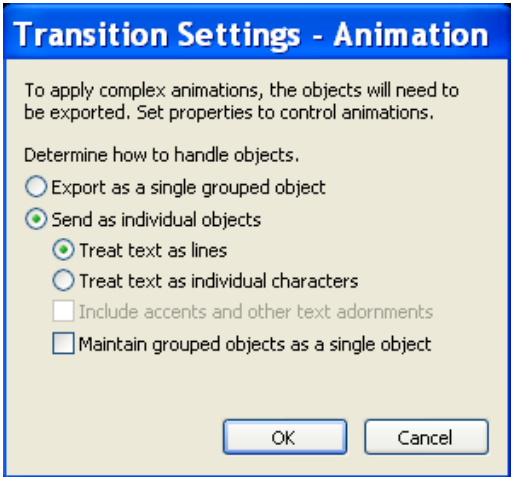

Transition Settings - Animation
To apply complex animations, the objects will need to be exported. Set properties to control animations.
Determine how to handle objects.
Export as a single grouped object
Send as individual objects
Treat text as lines
Treat text as individual characters
Include accents and other text adornments
Maintain grouped objects as a single object
OK
Cancel

Figure 4-84. Animation Transition Settings

Export as a Single Grouped Object

This option groups every item in the layout into a single object.

Send as Individual Objects

This option puts every graphic object and text line on a separate path. With this option, you can either treat the text as lines or as individual characters. By selecting to treat text as individual characters, you can animate each character separately.

If you have text or objects in a layout and you do not select an option, the Treat text as lines default setting is applied.

When you create your layout, you need to plan how text and objects work together in your animation. For items that will remain static, it's good practice to set them to Export as a single grouped object in the Transition Settings dialog. Or, you might want to fly the characters in one word separately, and have all remaining words fly whole. In this case, you need to Treat text as individual characters for the one word, and then Treat text as lines for the remaining words.

Work with Text

If you want to display large characters in Animation Editor, it is best to start out with large characters in CG Editor. While you can increase character size in Animation Editor using the Scale tool, scaling up can produce degraded character quality. In order to maintain the best quality, start out with larger characters in CG and then scale them down in Animation.

You can change the font and style attributes of your text and objects at any time, but you have to switch back to CG Editor to do so. In CG, you can change, add, or delete your text and objects.

When you switch back to Animation Editor, all existing paths are preserved and the rendered bitmap shows the updated text and objects. All new objects are placed on a separate path, and all deleted objects are completely removed.

Keyframes

Keyframes refer to the significant events that make up the path along which the object moves, such as the start and end points. A path with only one keyframe is the same as a static display. For movement, you need a minimum of two keyframes.

Insert Keyframes

There are three places to insert a new keyframe: before the selected keyframe, after the selected keyframe, or at the current frame in time.

To add a keyframe before or after a keyframe:

1 Select the keyframe you want to add a new keyframe to.

2 Select Edit > Insert Keyframe > Before Selected Keyframe to insert a new keyframe before the current keyframe.

or

3 Select Edit > Insert Keyframe > After Selected Keyframe to insert a new keyframe after the current keyframe.

When you insert a keyframe before or after, the number of frames in the entire motion path increases by 1 second (30 frames NTSC / 25 frames PAL) before or after the current keyframe.

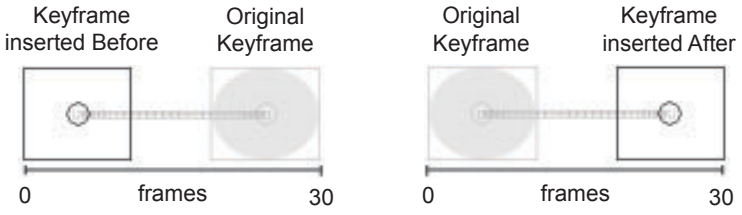


Figure 4-85. Keyframes Inserted Before and After Original Keyframe

When inserting a keyframe at the current frame in time, the keyframe plays no part in where the new keyframe is inserted. Instead, the new keyframe is inserted at the current frame in time, as indicated in the Current Frame field and by the Time Slider on the Preview toolbar.

To insert a new keyframe at specific frame in time:

1 Move the Time Slider on the Preview toolbar to the desired location in the animation path.

or

2 Enter a frame number into the Current Frame field.

3 Select Edit > Insert Keyframe > At Current Frame to insert a new keyframe.

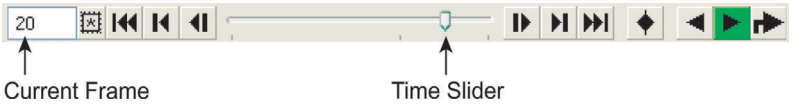


Figure 4-86. Keyframe Preview Toolbar

When you insert a keyframe at the current frame, no additional frames are added to the spline, so the motion path does not become longer. If the current frame in time is a keyframe, the Insert Keyframe > At Current Frame option is unavailable. In the following example, a new keyframe was inserted at frame 15.

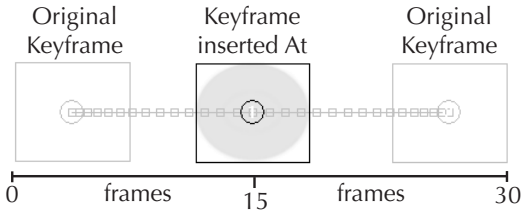


Figure 4-87. Keyframe Inserted At Current Frame

Insert Keyframe Defaults

You can press INSERT on the main keyboard or select Insert Keyframe from the right-click menu instead of using the Edit menu options. Whether the keyframe is inserted before, after, or at the selected keyframe depends on the default on the Edit > Insert/Paste Defaults menu.

When you first launch Animation Editor, the default is set to After Current Keyframe. You can change the default by selecting Edit > Insert/Paste Defaults and selecting the desired option. The option with the checkmark beside it is the current default. The Edit menu options override the default.

Shortcut Keys

If you want to insert a keyframe without having to select a menu item or constantly reset the default settings, use the following shortcut keys. You can insert a keyframe before, after, or at the current keyframe with a simple keystroke.

- SHIFT+INSERT places a keyframe before selected keyframe.
- CTRL+INSERT places a keyframe after selected keyframe.
- ALT+INSERT places a keyframe at current frame.

Insert keyframe shortcut keys override the default setting.

Delete Keyframes

You can delete a selected keyframe by using the following options:

- Press DELETE on the main keyboard.
- Select Edit > Delete Keyframe.
- Select Delete Keyframe from the right-click menu.

You cannot select a path with only one keyframe when in Animation Editor; you must be in CG Editor to delete a single keyframe.

Cut, Copy, and Paste Keyframes

You can cut, copy, and paste the selected keyframe(s) by using one of the following options:

- Edit > Cut, Edit > Copy, or Edit > Paste.
- Select Cut, Copy, or Paste from the right-click menu.
- Use shortcut keys CTRL+X (cut), CTRL+C (copy), or CTRL+V (paste).

If you have an Animation layout with only one keyframe, you must switch to CG to remove it.

There are several paste options on the right-click menu in Animation Editor.

- Paste Replace replaces the current keyframe with the one from the clipboard. Note that the timing of the keyframe does not change.
- Paste New creates a new keyframe from the clipboard before, after, or at the selected keyframe (depending on the Edit menu default setting).
- Paste At inserts the clipboard keyframe at the current frame in time (regardless of the selected keyframe).

Move Keyframes

Once you have added keyframes for each item in your animation, you need to reposition and assign attributes for each keyframe to create the desired spline path. To move a keyframe:

1 Select the Position tool from the Placement tab or from the Tools palette.

2 Select the keyframe to be moved.

3 Drag the keyframe to the new position, or enter a number value in the XYZ axes on the Position tab.

Select the Position Tool

Before you start selecting, dragging, and dropping keyframes, you need to make sure the Position tool is selected. Select the tool from the Tools palette or the Placement tab. The Position tool is selected when the cursor contains the arrow and crosshairs, as in the graphic to the right.

Select the Keyframe

The easiest way select a keyframe is to click the keyframe you want to move. However, if you are working with multiple keyframes that overlap, you may have a hard time determining whether you have selected the right keyframe.

To select the keyframe without clicking it directly:

1 Select the path name from the drop-down menu located to the left of the Attributes Palette.

2 Enter the keyframe number in the Key# field, or use the left/right arrows to select the key number.

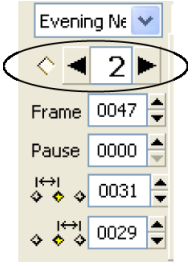


Figure 4-88. Keyframe Selection

Animation Editor indicates the number of frames between the previous and current keyframe and the number of frames between the current and next keyframe to help you specify precise frames on the timeline.

Drag-and-Drop Positioning

The easiest way to move a keyframe is to click and drag it to a new location on the screen.

Only keyframes within the safe title area are included in the render, but you can place keyframes outside this area to create a fly-in or fly-out effect.

Absolute Positioning

If you need absolute positioning to line up keyframes, use the Position fields on the Placement tab. In Animation Editor, position is defined by the X, Y, and Z coordinates. The X coordinate marks the horizontal position, the Y coordinate marks the vertical position, and the Z coordinate marks the depth. The center of the screen is (0,0,0) and positions are measured outward from the center point or focal point.

Figure 4-89. Keyframe Positioning

The easiest way to line up keyframes is to position the first keyframe, check the X, Y, and Z fields for its position, then select the next keyframe and enter the same information for the axis you are trying to line up. For example, enter the same number value in the X axis for all keyframes to align them along the same horizontal line.

Determine the Keyframe Order

The first keyframe in a path has a circled number I in the middle of it (see Figure 4-90.) This number refers to the order in which the keyframes appear. Movement always begins at keyframe I, then moves along the path to number 2, 3, and so on.

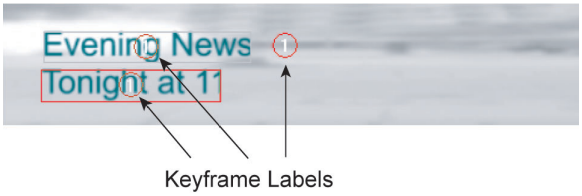


Figure 4-90. Keyframe Labels

If you want to reverse the order of keyframes, click the Reverse Path button on the FX palette. The keyframe labels change to reflect their new order in the path. When you preview the animation, the keyframe previously labeled I is displayed last in the motion path instead of first.

Bezier Curves

When you have an object with two keyframes, the path between the keyframes is always a straight line. If you add a third keyframe to the path, Animation Editor creates a bezier curve between the keyframes. If the three keyframes on the same X axis, the path will be a straight line. However, if you move the keyframes slightly out of alignment, the curve becomes obvious.

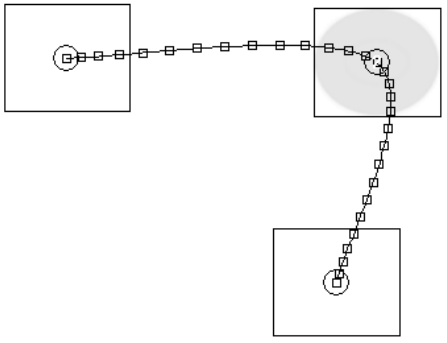


Figure 4-91. Bezier Curve

Display Options

Animation Editor offers several different display options to help simplify your workspace. These options include Display All Paths, Display Text Outlines, Snapshot of Current Object, and Snapshot of All Objects. Display options are all located on the bottom row of the FX palette.

Default Display

By default, Animation Editor displays all paths in wireframe view with the current point in time rendered for each path. This provides a 'snapshot' of the animation at the current frame in time. You can change and combine the display options at any time to suit your needs.

Table 4-32. Animation Display Options

	Option	Function
	Display All Paths	Shows an overall picture of how paths in the animation interact.
	Display Text Outlines	Shows how text paths in the animation interact.
	Snapshot of Current Object	Shows detail work where you need to see a fully rendered snapshot of the selected path(s).
	Snapshot of All Objects	Shows fine detail work where you need to see exactly what the fully rendered object will look like at a particular frame, and in relation to other objects.

Display All Paths

Display All Paths shows every path in an animation. Use this option if your paths are fairly simple with minimal overlap. Otherwise, the display can get complicated and you may have a hard time figuring out which path or object is selected. When this option is not enabled, you only see the selected path.

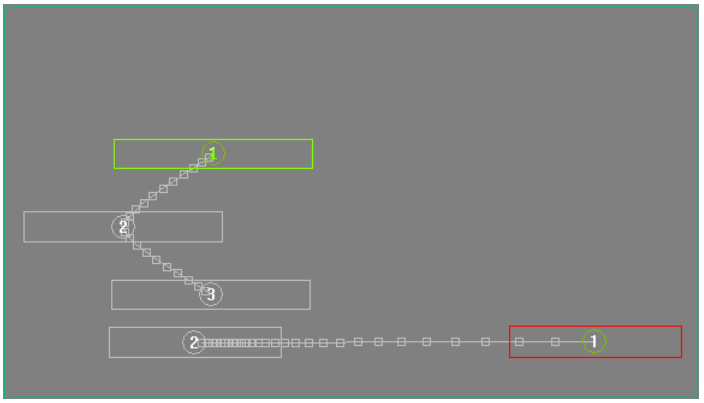


Figure 4-92. Display All Paths

Display Text Outlines

Display Text Outlines provides only a wireframe view of your objects. Select this option instead of Snapshot of Current Object or Snapshot of All Objects for a less cluttered display. You will not be able to see the CG formatting of your images.

Figure 4-93. Display Text Outlines

Snapshot of Current Object

Snapshot of Current Object provides a fully rendered snapshot of the current frame in time for the selected path only. Use this option to view the rendered snapshot so you can see what your objects will look like at a particular frame. Rendering on the fly slows down your display slightly, and does not represent the true time it takes for the objects to travel along the path. For optimal speed performance, do not select this display option.

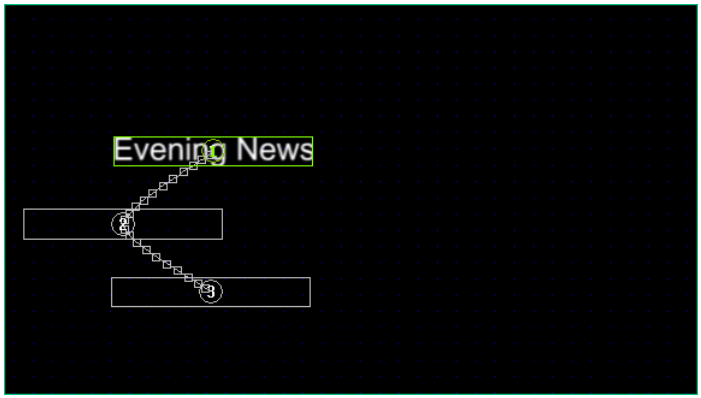


Figure 4-94. Snapshot of Current Object

Snapshot of All Objects

Snapshot of All Objects provides a fully rendered bitmap of the current frame for all paths in your animation. Snapshot of Current Object and Snapshot of All Objects are radio buttons, so you can only select one display option at a time. As with Snapshot of Current Object, viewing the path with this option selected slows down the display.

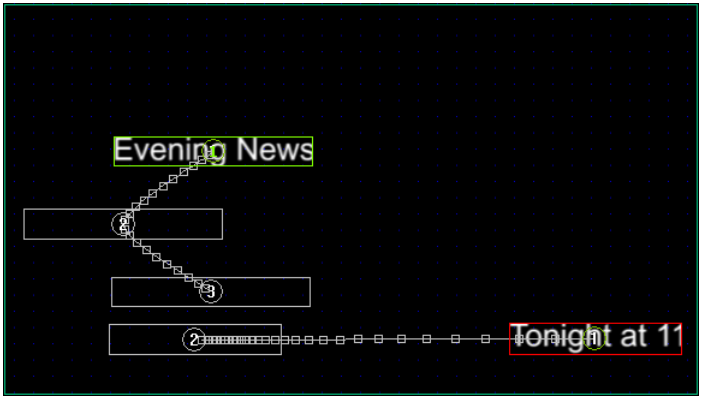


Figure 4-95. Snapshot of All Objects

Preview Motion Paths

It is important to preview your animation, even when you make a minor change. When one keyframe is changed it can affect the entire spline, timing, and movement of the path, as well as the interaction of objects.

On the Computer Screen

The term 'preview' refers to viewing the animation in Animation Editor on the computer screen, not on your frame buffer. A preview produces only a wireframe outline of the path, so you are not able to see exactly what text and objects look like at each frame. However, the preview provides accurate timing and spline information and does not require rendering, so you can view changes quickly and easily. You need to render an animation only when you want to do a take. To save time, just preview the results on your computer screen.

Preview Toolbar

The Preview toolbar, also called the Scrubber, is located on the bottom of the FX workspace. It provides different options for previewing an animation on the computer screen. These options include previewing the whole animation or only from the current frame, and also include controls to jump to a specific frame in a path.

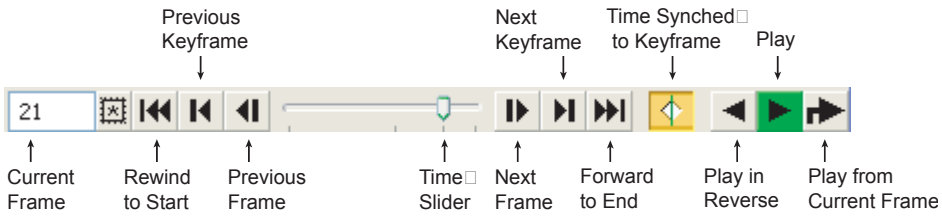


Figure 4-96. Preview Toolbar Controls

The Time Slider

The Time Slider gives you a visual representation of where you are at any point in time in your animation. You can select any frame in the animation by dragging the time slider to the desired location.

When you have more than two keyframes in your animation, the location in time of each keyframe is indicated by small vertical marks along the bottom of the Time Slider.

Play Controls

Many of the preview toolbar controls do not actually run through an animation path; they jump the preview to a particular frame, so you can see exactly what each path looks like at that frame. Only three of the controls run a preview: Play, Play Reverse, and Play from Current Frame.

Table 4-33. Play Controls Functions

Button	Function
Play	Plays the entire animation, starting at the first keyframe and moves forward in time to the last keyframe, and then resets back to the beginning.
Play in Reverse	Plays the entire animation in reverse, starting at the last keyframe, and moves backward in time to the first keyframe.
Play from Current Frame	Plays the animation starting at the current frame in time and moves forward to the last keyframe, and then resets back to the current frame.

Play and Stop Function

The green Play button previews the animation from the beginning. While the preview is running, the Play button turns into a red Stop button. You can click the Stop button to stop (or pause) the preview at any point along the path. To continue the preview from the current paused frame, click the Play from Current Frame button. The preview starts from the paused frame, plays to the end, and then resets back to the paused frame. If you click the Play button again, the preview starts back at the first frame, plays the entire animation, and then resets back to the paused frame.

Preview Options

Use the buttons on the Preview toolbar to run a preview in the FX workspace. Use the Preview options to change how the preview is displayed. Select Go > Go Options to access to preview options.

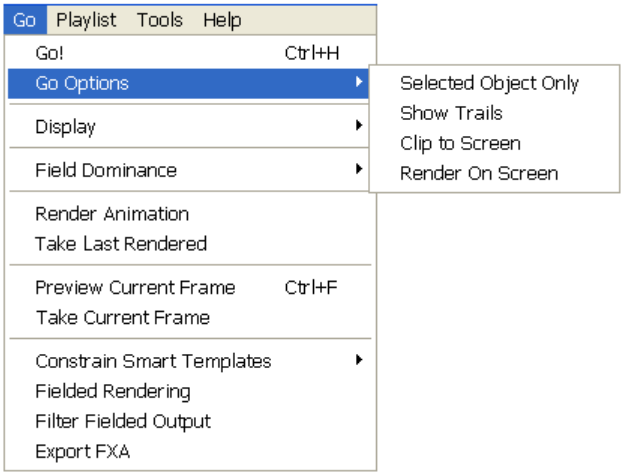


Figure 4-97. Go Menu Options

Table 4-34. Preview Options

Option	Description
Show Trails	Leaves a wireframe trail of each frame in the path. (Useful for judging the smoothness of a spline curve)
Clip to Screen	Limits the display of the preview to the screen area only. (Useful if you want to know exactly what objects, or how much of an object, will appear on the video screen)
Render on Screen	Previews the entire animation. (Useful when you need to see exactly what the fully rendered object will look like at a particular frame, and in relation to other objects)
Selected Object Only	Previews only the selected path in the animation.

Motion Templates

Motion templates are preset effects that you can apply to any object in Animation Editor. Templates include all placement, shape, filter, spline, and time information for a path. Templates do not include the text and objects created in CG Editor. You can add your own templates to the motion registry, import or export templates as you need them, or you can use the preset templates.

All template settings are located on the Templates tab. Options include adding, appending, or overwriting the position and shape information of the keyframes currently in the path, inserting the template at the start or end of the selected path, and setting the duration and start time.

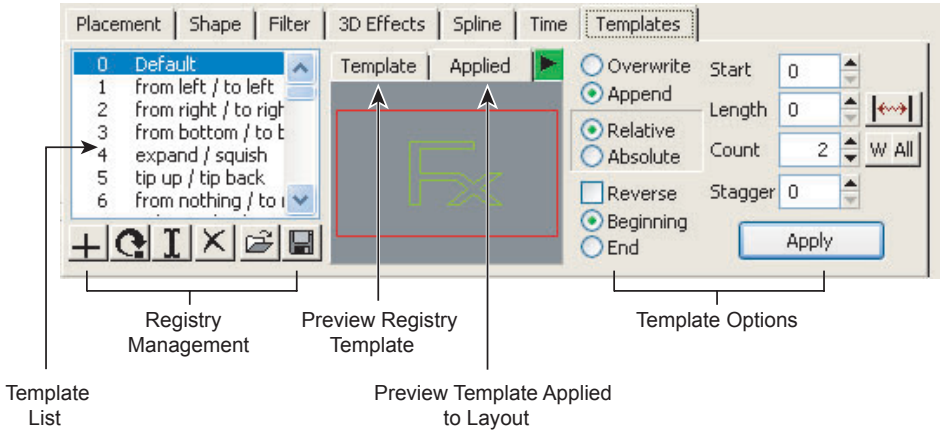


Figure 4-98. Templates Tab

Select a Template

The Template List includes all preset templates, as well as any custom templates you may add to the registry. To select a template from the list, click it.

Preview a Template

The Template Preview window provides a view of what the template looks like. To preview a template:

1 Select a path in the FX workspace.

2 Select a template from the list.

3 Click the Template tab above the preview window, and then the green play button to the right to see how the template works.

4 Click the Applied tab and then click the play button to see how the template works with the selected path.

Apply a Template

Motion templates take the text and graphic objects created in CG Editor and create an animation path for each object based on the information in the template. You can apply a template to an individual character, a single path, multiple paths, or all paths in a single animation.

Apply to Individual Characters

In Animation Editor, you can apply a template to individual characters in a word or line of text.

To apply a template to individual characters:

1 In CG Editor, select the Treat Text as Individual Characters radio button on the Transition Settings dialog.

2 Switch to Animation Editor.

3 Select any single character within a word or text line.

4 Click the Select Word/Line button to choose the entire word or text line.

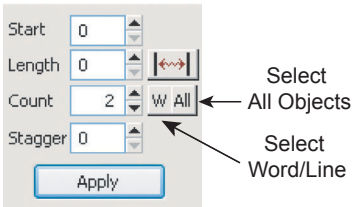


Figure 4-99. Object Path Selection

5 Click Select Word/Line again while on the same single character to apply a template only to that individual character.

6 Click Apply.

7 Click the Play button on the Preview toolbar to view the results.

Apply to All Objects

You can apply template effects to all objects in the layout.

To apply a template to all objects:

1 In CG Editor, select the Treat Text as Lines radio button on the Transition Settings dialog.

2 Switch to Animation Editor.

3 Click on the FX workspace.

4 Click the Select All Objects button.

5 Click Apply.

6 Click the Play button on the Preview toolbar to view the results.

To switch between applying templates to either individual characters or all objects, you must adjust the export settings in the Transition Settings dialog in CG Editor.

Apply to Multiple Paths

In Animation Editor, you cannot use SHIFT or CTRL to select multiple paths. Instead, use the Count field to apply a template to multiple paths. Enter the number of paths you want the template applied to in the Count field. The template is applied to the selected path, plus the next paths that equal the number set in the Count field.

For example, if you have six paths, but you want to apply the template to paths 2, 3, 4, and 5 only, select path 2 in the FX workspace and set the number in the count field to 4. The template is applied to paths 2 through 5, but not 1 and 6.

Stagger a Template

Staggering starts each path after a set number of keyframes. For example, if you have five paths and you set the stagger value to 10, the first path begins at the Start frame, the second path begins 10 frames later, the third begins 20 frames later, and so on. Use this option if you want to fly multiple objects or individual characters on screen, spaced evenly apart in time.

To stagger a template, follow this example:

1 Set up five paths containing two keyframes

2 Switch to the Time tab, and click on the first path.

3 Switch to the Templates tab, and select a template from the preset list.

4 Type 5 in the Count field, 0 in the Start field, 30 in the length field, and 10 in the Stager field.

5 Click Apply.

6 Click on the Play button in the Preview toolbar to view the results.

Template Options

Before you apply a template to a path, you need to select the combination of options that determine how and where along the path the template is applied, as well as the total length and start frame for the path.

Template options must be set when applying a template. You need to define the Start frame and length of the resulting path. The following subtopics describe the Overwrite, Append, Insert, and Timing options.

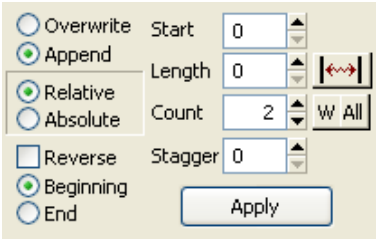


Figure 4-100. Template Options

Overwrite

Overwrite deletes all information, including keyframes, in the selected path (except the object itself), and applies the template instead. Overwrite behavior depends on whether you select the Relative or Absolute option. These options determine where the template is inserted in the selected path.

If you select Relative, the template attributes are applied, and the current keyframe position stays the same. Relative maintains the position of the selected keyframe and applies the template relative to this starting position. With this option, you can insert the template at the beginning or end of the selected keyframe.

If you select Absolute, all the preset keyframe attributes from the template are used. Absolute ignores the size and position of the current keyframes in the original path and forces the keyframes into the preset template attributes.

Append

The Append option adds the template effect to the existing selected path. All previously set information, including keyframes, remains intact. Append behavior depends on whether you select the Beginning or End option. If you select Beginning, the template effect is added prior to the first keyframe. If you select End, the template effect is added after the last keyframe.

Insert Options

Insert options affect where the template is inserted into the current path. The options are Beginning and End, and the results they produce are dependent upon the entire original path rather than on the selected keyframe.

If you select Beginning, the template is inserted before (at the beginning of) the original path. If you select End, the template is inserted after (at the end of) the original path.

Timing Options

You can also set timing options for the template, including the Start frame, the Length of the path, and whether you want to Stagger the template.

Table 4-35. Timing Options

Option	Result
Start Frame	Starts the path at a particular frame in time. (Similar to shifting the entire path forward in time using the slider on the Time tab)
Length	Sets the duration for the path in frames before you click Apply. (If you change the length after applying the template, keyframes are added)
Clip Length button 	Forces the length of the path to match the value set in the End field on the Time tab. (If you select the Clip Length button, the Length field is unavailable. You cannot edit this field until you clear the Clip Length button. If you wish to adjust the length without clearing the Clip Length button, you can change the value in the End field on the Time tab)
Stagger	Sets each path to start a set number of frames apart in time. (Available only if applying the template to more than one path)

Reverse Preset Order

Each template has a preset order in which keyframes appear. To reverse the preset order, select the Reverse checkbox. This option is useful if the effect in the template is set to fly on-screen but you really want the effect to fly off-screen, or vice versa.

Combine Multiple Templates

You can combine multiple preset templates to create your own custom template. Use the Append, Insert, and Timing options to determine how the combined templates work together in the new animation path.

The preset templates take the text and graphic objects created in CG Editor and make a path for each object based on the information in the template. Since the templates include all placement, shape, filter, spline, and time information for a path, you can create complex custom paths using only a single keyframe or object. For example, when you insert a template at the beginning or end of the original single keyframe or object, additional keyframes from the templates are automatically added to create an animation path.

To combine multiple templates:

1 Select the keyframe or path from the FX workspace

2 Select a template from the Templates list.

3 Select Append. The Overwrite option deletes all information in the selected path (except the object itself), and applies the template instead.

4 Select Relative to maintain the selected keyframe's start position. Absolute applies the template's default start position.

5 Select Beginning or End for the placement of the template in the path.

6 Click Apply. The attributes from the applied template are now stored in your animation path.

7 Select another template from the list and apply it to the beginning or end of the same path.

8 Continue selecting and applying preset templates until you have created the desired effect. It is good practise to use the Template Preview window before you apply the template to see how it will look in the animation path.

See "Motion Timeline" on page 286 to adjust the timing of you animation.
See "Motion Template Registry" on page 279 for information on saving your custom templates.

Motion Template Registry

The motion template registry is designed to make it easy to manage frequently used effects. Instead of using the preset templates, you can add your own templates to the registry. You can import and export templates as you need them. You can also adjust the preset templates to make them fit your needs. The registry management buttons are all located on the Templates tab.

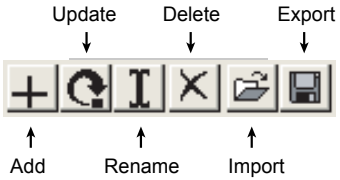


Figure 4-101. Registry Management Buttons

Add a Template to the Registry

If you are working with multiple paths, you can include a single path or all paths in one template. Make sure you set all the placement, shape, filter, spline, and time information for all the paths before you add the template to the registry.

To add a new template:

1 Select the Templates tab on the Attributes Palette.

2 Select the path or paths you want to include in the template.

3 Press the Add button. The FX Template dialog asks whether you are including the selected path or all paths in the new template.

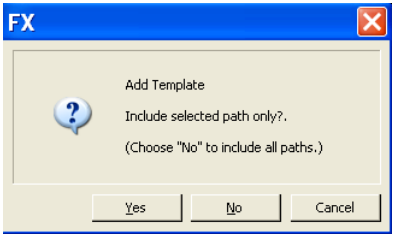


Figure 4-102. FX Template Dialog

4 Press Yes to add a single path to the template, or No to include all paths.

5 Enter in a name and number for the new template in the Add Template pop-up.

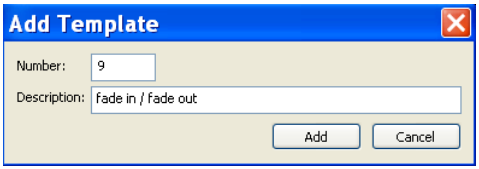


Figure 4-103. Add New Template

6 Click OK to save the new template in the registry.

Naming Conventions

When you add a template to the registry, you need to assign a name and number to the template. Once in the list on the Templates tab, the template is sorted by number, and you need to be able to recognize the contents by its name. Naming conventions are especially important if multiple users are sharing a registry. Make the name intuitive enough that all users can tell what information the template contains without having to preview it.

To rename a template, simply click the Rename button and enter a new name in the field provided. You can also change the order in which templates appear in the list by changing the template number.

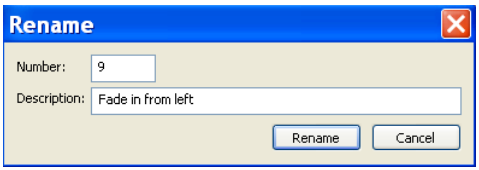


Figure 4-104. Rename Template

Update a Template

You can make changes to a template's placement, shape, filter, spline, and time information after it has been added to the registry. To update a template without changing the name:

1 Select the template and make the desired changes in the FX workspace.

2 Press the Update button. The FX Template dialog opens and prompts you to select Yes or No to determine which paths to include.

3 Once selected, the Update pop-up appears and prompts you to confirm that you want to update the selected template.

4 Click Yes to update the template.

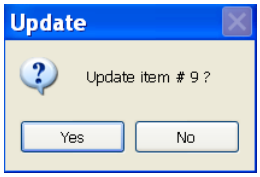


Figure 4-105. Update Template

Delete a Template

If there is a template in the registry that you no longer use, just select it and click the Delete button to remove it from the list. The Template Manager pop-up prompts you to confirm that you want to delete the selected template.

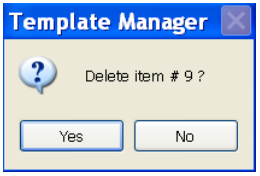


Figure 4-106. Delete Template

If you delete a template, the remaining templates are not renumbered, so there may be a gap in the numbering. To change the numbers, click Rename and change the number for each remaining template.

Adjust a Preset Template

For each preset template in the list, all Animation Editor options were set when the template was added to the Registry. A template may be close to, but not exactly, what you want.

To adjust a preset template:

1 Select and apply the desired template.

2 Make any changes to the placement, shape, spline, time, and filters in the FX workspace.

3 Press the Add button to include the template in the list under a new name.

Spline Path

A spline is a curve that determines how an object moves from one keyframe to the next. When you add keyframes, a series of frames connects the keyframes. The sum of the frames, from the first keyframe to the last keyframe, defines the spline.

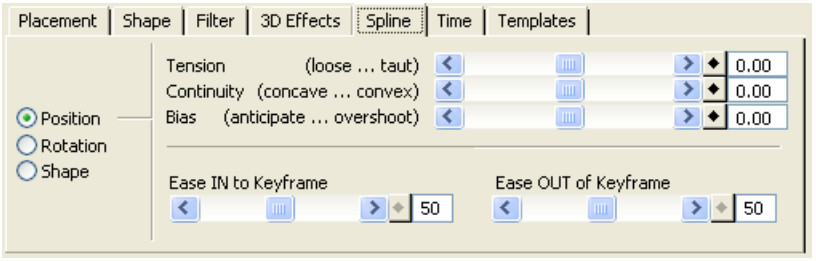


Figure 4-107. Spline Tab

Spline Curves

In Animation Editor there are three spline curves for every path: the Position spline, the Rotation spline, and the Shape spline. Each spline has it's own tension, continuity, and bias value. By default, the Position spline is selected. You can only see the Position spline in the FX workspace. You have to imagine the other two splines, although you can see the effects of a change in any spline at any point in time in the preview.

Why Change the Spline?

Animation Editor always tries to create the smoothest path between keyframes, anticipating how an object must move in order to arrive cleanly at the next keyframe. In most cases, a change at one keyframe affects the spline two keyframes before and two keyframes after the keyframe you alter.

For some properties such as rotation and spin, you may not want Animation Editor to anticipate the motion, or you may need to slightly adjust the movement into a keyframe. You may also want to create abrupt changes in motion such as bounces.

Change the Spline Properties

Each spline consists of three properties: tension, continuity, and bias. The values for each property are represented on the Spline tab by a slider bar.

To change a spline property:

- Drag the slider bar to the left to decrease the value.

- Drag the slider bar to the right to increase the value.
- Enter a value for each spline property directly into the number field located beside the slider.

The maximum and minimum values are +/- 5.00. The result of the value depends on the property you are changing. See "Tension, Continuity, and Bias" on page 284 for details.

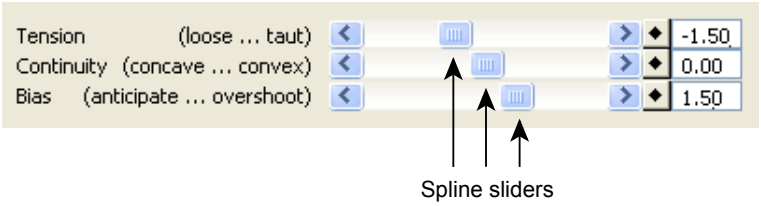


Figure 4-108. Spline Sliders

Reset to Defaults

There are three ways to reset the Tension, Continuity, or Bias values back to the default:

- Double-click the slider.
- Click the reset button to the right of the slider.
- Double-click the Tension, Continuity, or Bias number field.

Tension, Continuity, and Bias

Every spline has three properties: Tension, Continuity, and Bias. To make a change to any spline, you must first select the correct spline. Then you can adjust the Tension, Continuity, or Bias values for the selected spline. The best way to understand these properties is to experiment with your own spline paths. A change in any of these properties is most obvious on a keyframe that is between two other keyframes.

Tension

Tension adjusts the rigidity of the spline, allowing you to tighten or loosen the curve. The default tension is set to 0.00, so you have to adjust this value up or down to change the tension.

- Drag the Tension slider right to increase the tension on the curve, thereby tightening the spline. The spline curve effectively turns itself inside out when you drastically increase the tension.
- Drag the slider to the left to decrease the tension and make the curve much more slack. The spline spreads out and is now shaped like a horseshoe.

Figure 4-109. illustrates the different tension values on a simple three point spline curve.

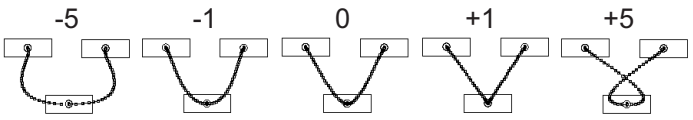


Figure 4-109. Spline Tension

Continuity

Changing the continuity of a spline affects the smoothness of the path coming into and out of the keyframe.

- Drag the continuity slider to the left to increase the continuity. An increase in continuity creates a swooping effect coming into and out of the keyframe.
- Drag the slider to the right to decrease the continuity. A decrease in continuity creates a bumpy effect coming out of the previous keyframes, and going into the next keyframe. Decreasing the continuity creates a sharp corner or quick change of direction in the spline.

Figure 4-II0. illustrates the different continuity values on a simple three point curve.

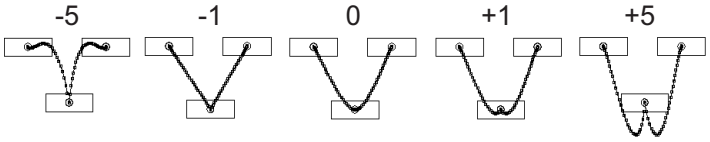


Figure 4-110. Spline Continuity

Bias

Bias weights the motion coming into or out of a keyframe. Animation Editor averages the two values, and creates an even motion. An increase in bias weights the average toward the motion coming out of the keyframe. A decrease in bias weights the average toward the motion coming into the keyframe. Figure 4-III. illustrates the different bias values on a simple three point curve.

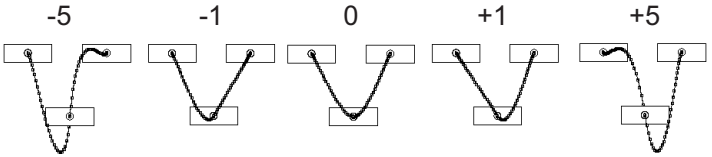


Figure 4-111. Spline Bias

Ease In and Ease Out

You can adjust the tension, continuity, and bias in conjunction with the Ease In and Ease Out values to create very dramatic transitions into and out of the keyframe. Adjust the Ease In value to increase or decrease the speed into the selected keyframe. Adjust the Ease Out value to increase or decrease the speed coming out of the selected keyframe.

Adjusting these values increases or decreases the number of frames between keyframes. Click the Reset button to set the default frame value back to 50.

Figure 4-112. Spline Ease In and Out of Keyframes

Motion Timeline

Since time is measured in frames, the timing of your animation depends on the number of frames in each path. You can adjust the length, point in time at which the path runs, amount of time between keyframes, or the start and end frames of the path. The Time tab provides a track view of every path in an animation. The Track Sliders represents where the motion occurs on the track.

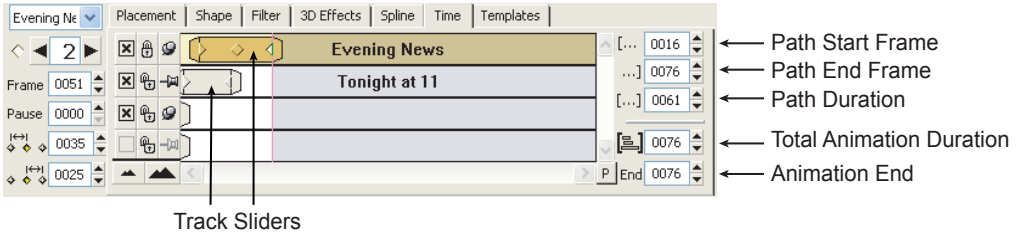


Figure 4-113. Time Tab

The Appearance of Time

In the FX workspace, time is captured, allowing you to see every moment in time for the animation. For preview purposes, the current point in time for each path is outlined in green in the FX workspace, and you can scroll through time using the Time slider on the Preview toolbar.

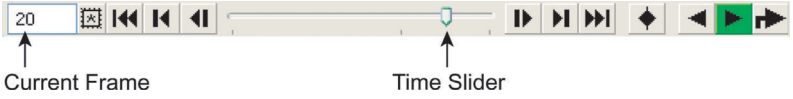


Figure 4-114. Preview Toolbar Time Slider

Adjust the Length of a Path

To adjust the length of an animation path, simply add or subtract frames across the entire path or between keyframes. The are a number of ways to change the length of a path.

- Enter a frame value in the Path Start Frame or Path End Frame fields.
- Enter a precise number of frames in the Path Duration field.
- Drag the right edge of the Track Slider to the right, or the left edge to the left, to increase the length of the path.
- Drag the right edge of the Track Slider to the left, or the left edge to the right, to decrease the length of the path

The numbers in the Path Duration and Total Animation Duration frame fields change as you adjust the length of the path.

Shift the Path in Time

You can shift a path in time by entering a new start time in the Path Start Frame field, and a new end time the Path End Frame field. In order to maintain the current length of the path you must change both the start and end times by the same number of frames.

Instead of shifting the animation path by entering new start and end frames, you can simply click the center of the Track Slider, hold down the left mouse button, and drag it to the left or right. The entire path moves along the timeline, while the number of frames in the path remain the same.

The numbers in the Path Duration and Total Animation Duration frame fields remain the same as you shift the path, but the Animation End will change according to the new path position.

Keyframe Markers

Keyframe markers appear as small diamonds on the Track Slider for each path. You can change where a keyframe occurs in the path by clicking on the keyframe marker and dragging to the left or right to change its location. As you drag the marker, the number in the Frame field to the left of the timeline identifies the current frame. Changing where a keyframe occurs in the path does not change the duration of the path, but it does change the number of frames between keyframes.

Timeline Controls

All controls for setting the timing of motion paths are located on the Time tab. The controls are the Track Sliders, Path Start Frame, Path End Frame, Path Duration, Total Animation Duration, and Animation End.

Track Sliders

The timeline of an animation consists of Track Sliders for each object in the animation. The length of a Track Slider is measured in frames. By default, Animation Editor adds one second (30 frames) between inserted keyframes. Each path in an animation has its own Track Slider and the name of the path is labeled; each path is totally independent of the Track Sliders for other paths in your animation. Use the vertical scroll bar to the right of the Track Sliders to see all the paths in your animation.

Drag the edge of the Track Slider to the right or left to increase or decrease the length of the path. You can also enter frame values in the Path Start Frame or the Path End Frame fields. See "Adjust the Length of a Path" on page 286 for details.

Time Options

There are two types of options on the Time tab: options that apply to the entire animation, and options that apply to the current path only.

Table 4-36. Time Options

Option	Effect
Total Animation Duration	• Sets the total number of frames in the animation. • Indicates how long the entire animation will take
Animation End	• Indicates the frame furthest along in time for all paths in the animation.
Path Start Frame	• Sets the start frame of the path.
Path End Frame	• Sets the end frame of the path.
Path Duration	• Sets the duration for the path in frames.

Locked Paths

The Lock Path option locks the path in place in the workspace. Once a path is locked, you cannot move or edit its attributes or position.

Push Pins

Push pins leave a path on the screen until the entire animation is complete. When the push pin is pointing down (pinning the path in place), the path remains on screen until the end of the animation. When it is pointing sideways, the path disappears when it reaches its last frame. All paths are pinned by default.

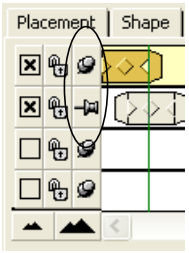


Figure 4-115. Push Pins

Delay

Adding a pause between keyframes forces Animation Editor to stop and hold at a keyframe for a set number of frames before the path continues on to the next keyframe. Select a keyframe, then add the number of frames to pause in the Pause field. The number in the Animation End and Total Animation Duration frames fields change because the number of paused frames is added to the total length of the path.

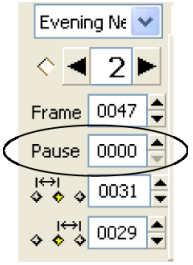


Figure 4-116. Keyframe Pause

Zoom In and Out

The Zoom In and Zoom Out buttons can make editing the timeline easier. For example, if you are working with long paths that contain hundreds of frames, there is not enough space to display the entire timeline at once and you will have to use the horizontal scroll bars to see the entire timeline. Instead, click the Zoom Out button. Animation Editor reduces the amount of space filled by the timeline on the Time tab. Using these options does not affect the length of a path.

Adjust the Keyframe Axes

When you rotate, spin, or offset an object, you are really adjusting the behavior of the keyframe on a particular axis. The controls for all of these properties are located on the Placement tab, as well as on the FX palette. You can only change one property at a time, but you can apply every property to a single keyframe.

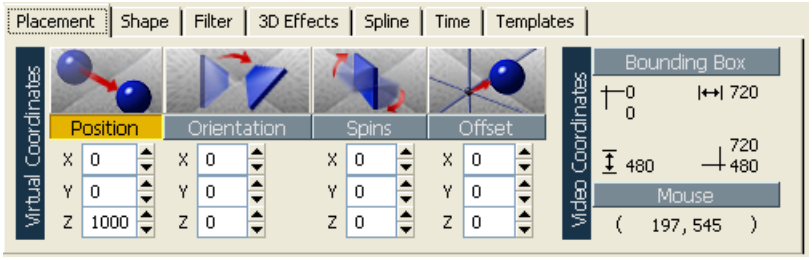


Figure 4-117. Placement Tab

Work in Z Space

In three-dimensional space, the depth of your text and graphics in the workspace is represented by the Z axis. Every frame in a path is defined by coordinates on the X, Y, and Z axes. In Animation Editor, you can change the Position, Orientation, Spins, and Offset in all three dimensions.

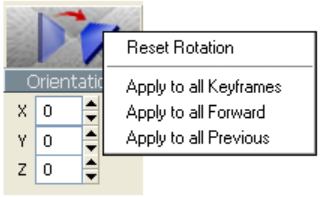
To adjust the Position, Orientation, or Offset, click a keyframe, and hold down the left mouse button while dragging it up, down, left, or right to change the shape. Changing a value on the Z axis can make an object seem to come closer or move farther away from the surface.

To constrain a change to the Z axis only, use one of the following options:

- Hold down the left mouse button along with the Z key while dragging the keyframe.
- Hold down both the right and left mouse buttons while dragging the keyframe.

Keyframe Axes Right-Click Menu

When adjusting the behavior of the selected keyframe on a particular axis, each control and tool button on the palette contains a right-click menu. The right-click menu lets you reset the field values, and control how the behavior is applied to the keyframes.



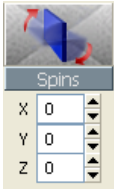
- Apply to all keyframes.
- Apply to all Forward adjusts all keyframes after and including the current one to the end of the path.
- Apply to all Previous adjusts all keyframes up to and including the current one in the path.

Orientation (Rotate)

You can rotate any keyframe around the X, Y, or Z axes individually, or in any combination of the three. Select the Orientation tool, then drag left, right, up, or down to get a combination of rotation on the X, Y, and Z axes. You can also enter the rotation degree in the X, Y, or Z fields. You can rotate a keyframe up to +/- 359° on each axis. If you want more than one full rotation, use the Spins control.

Spins

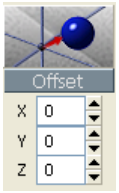
Spinning a keyframe forces it to tumble end over end around a particular axis. Select the Spins tool, then click the keyframe to spin and drag up to create a clockwise spin, or drag down to create a counter-clockwise spin. You can also enter the number of spins in the X, Y, or Z fields.



Note: When you set a spin, the spin occurs *before* the keyframe, on the spline leading into the keyframe, so make sure you have the right keyframe selected. The number of spins you enter will be evenly divided across the number of frames between the keyframe you use to spin and the preceding keyframe.

Offset

Offset moves the focal point from the center of the keyframe to a new location. Select the Offset tool and drag the keyframe up or down to offset the Y axis, drag the keyframe left or right to offset the Y axis, or hold down both mouse keys while dragging to offset the Z axis. You can also enter the offset in the X, Y, or Z fields.



How Offset Affects Rotation

Offset is only a factor when you are working with Orientation or Spins. Animation Editor rotates an object around a pivot point. By default, this pivot point is at the center of the keyframe. When you change the offset, you are changing the location of a keyframe relative to the pivot point, which is fixed. You are moving the keyframe away from the pivot point so that it orbits around the offset point.

Change the Keyframe Shape

You can change the shape of a keyframe in three ways: Extend, Skew, and Scale. The controls for all of these properties are located on the Shape tab, as well as on the FX palette. You can only change one property at a time, but you can apply every property to a single keyframe.

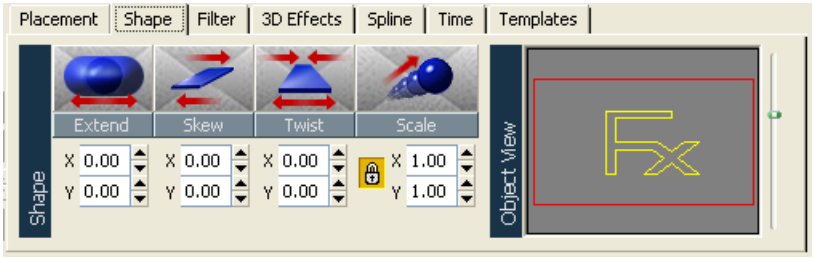


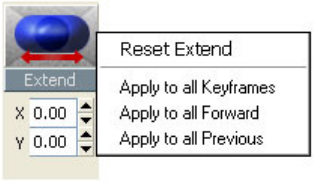
Figure 4-118. Shape Tab

What Happened to Z Space?

While you can fly a 2D object in 3D space, you cannot alter its shape in three dimensions because the true shape of the object exists only in two dimensions: X and Y. That's why there is no Z coordinate field for any of the properties on the Shape tab.

Keyframe Shape Right-Click Menu

When changing the shape of a keyframe, each control and tool button on the palette contains a right-click menu. The right-click menu lets you reset the field values, and control how the behavior is applied to the keyframes.

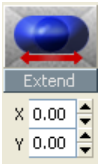


- Apply to all keyframes.
- Apply to all Forward adjusts all keyframes after and including the current one to the end of the path.
- Apply to all Previous adjusts all keyframes up to and including the current one in the path.

The Object View right-click menu lets you preview your shape adjustments in Flat View or 3/4 View. The Object View Slider adjusts the level of object zoom.

Extend

Extend stretches the keyframe, adding an equal amount of area to each side so that the center point does not change. A value greater than 0 makes the keyframe wider or taller, and a value less than 0 makes the keyframe smaller. You can extend the keyframe on both axes, one axis at a time.



- Drag left or right to extend the keyframe on the horizontal or X axis.
- Drag up or down to extend the keyframe on the vertical or Y axis.

Skew

Skew slants the keyframe on one or both axes. Drag the keyframe up or down to skew the keyframe on the Y axis. Drag left or right to skew the keyframe on the X axis.

The following table shows the result of applying the skew tool in various ways to a particular axis.

Table 4-37. Skew Results

Axis	Drag	Affects keyframe...
X axis	left	Top skews left and bottom skews right.
X axis	right	Top skews right and bottom skews left.
Y axis	up	Right skews upward and left skews downward.
Y axis	down	Right skews downward and left skews upward.

Scale

Scale resizes an object relative to its original size. The values in the X and Y axis fields are directly related to the amount by which object dimensions are increased or decreased. For example, a value of 0.5 in the X axis and 1.5 in the Y axis will make the object half the original length and one and a half times the original width.

Select the Lock button to modify the X and Y axis values together, maintaining the aspect ratio as you scale. Clear the Lock button to scale the X and Y axis individually.

You can only modify the X and Y axis individually by entering a number value; dragging the object maintains the original aspect ratio.

- Drag right or down to increase the keyframe size.
- Drag left or up to decrease the keyframe size.

Motion Filters

Filters are special effects that you can apply to a keyframe to change the way an object looks over time. All filters are applied at a specific keyframe, initiating a change from one keyframe to the next. Filters include Transparency, Crop, Mosaic, Luminance, and Tint. All filters are located on the Filter tab.

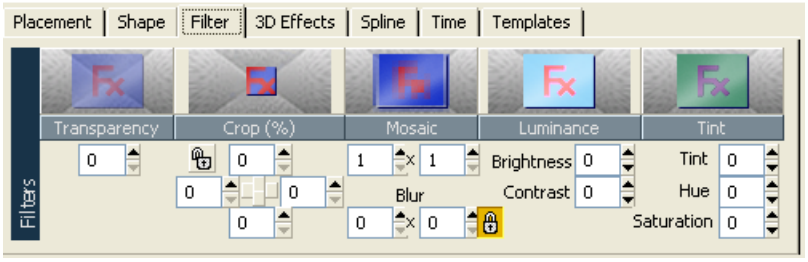
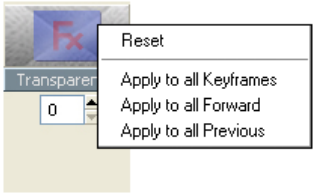


Figure 4-119. Filter Tab

Motion Filter Right-Click Menu

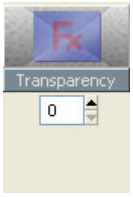
When applying filters to a keyframe, each control and tool button on the palette contains a right-click menu. The right-click menu lets you reset the field values, and control how the behavior is applied to the keyframes.



- Apply to all keyframes.
- Apply to all Forward adjusts all keyframes after and including the current one to the end of the path.
- Apply to all Previous adjusts all keyframes up to and including the current one in the path.

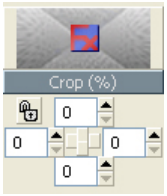
Transparency

Transparency changes the alpha value of an object over time, so you can fade an object in or out between keyframes. The value you set is a percentage of complete transparency; the lower the value, the more opaque; the higher the value, the more transparent. If you have three keyframes and you set the transparency value for the first keyframe to 100, the second keyframe to 50, and the third keyframe to 0, the object appears to gradually fade in over time. Transparency values range from 0% to 100%.



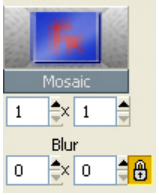
Crop

Crop cuts off or reveals a percentage of an object over time. You can set a different crop value for each side of an object. Crop values on all sides range from 0% to 100%. If you set a crop on more than one side, the values can 'bump' into each another. Select the Lock button to modify all sides at once. Select a combination of individual Lock buttons (one for each side) to crop specific sides at the same time. Clear each Lock button to modify sides independently.



Mosaic and Blur

Mosaic creates a resolution reduction effect which transforms objects into large blocks. In turn, the blocks are made somewhat transparent which blurs them slightly. The Mosaic effect is often used to block out and a person's face on video to hide their identity.



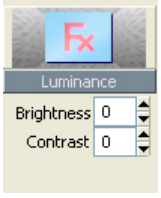
The Blur effect creates a soft blur, transforming all hard edges into softened edges. The more Blur you apply to edges, the softer the edges become. You can set Blur on an object's width independent of its height one pixel at a time. Or, you can increase or decrease blur on both the width and height of an object at the same time using the Lock button. Select the Lock button to blur the width and height together. Clear the Lock button to soften object edges independently.

Tint

Tint adjusts the color values of an object over time. This effect allows you to gradually change the saturation of your object from black and white to color, or to change the object from one color to another between keyframes. Minimum and maximum values for Tint, Hue, and Saturation are +/- 255.

Luminance

Luminance adjusts both the brightness value and the contrast value of an object over time. You can use Luminance as a lighting effect where the light seems to move from one letter to another, or one object to another over time.



3D Effects

3D Effects apply pre-defined motion effects to your animation. The 3D effects are located on the 3D Effects tab and include the following motions: Squish, Flop, Peels/Curls, Blinds, Twist, Shatter, Ripple, Torus, and Blackhole. The 3D Effects tab displays thumbnail folders of the available motion effects.

Figure 4-120. 3D Effects Tab

Figure 4-121.

Motion Options

Each 3D effects folder contains individual thumbnails showing a variety of motion options. To view the animated variations for a particular 3D effect, simply select that folder.

Figure 4-122. Animated Thumbnails

3D Effect Options'

Before you apply 3D effects to your animation, you need to select the options that determine how and where along the path the effect is applied.

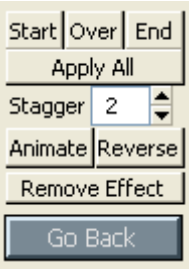


Figure 4-123. 3D Effect Options

Insert Options

Insert options affect where the 3D effect is inserted into the current path. The options are Start, Over, and End, and the results they produce are dependent upon the entire path rather than on the selected object.

If you select Start, the effect is inserted at the beginning of the path. If you select End, the effect is inserted at the end of the path. If you select Over, the effect is applied over the entire path, without removing any other attributes of the path.

Apply All

Select the Apply All button if you want to apply the 3D effect to every path in your animation. This button is useful when you have many paths in the workspace.

Animate

Select the Animate button to view an animated variations of the 3D effect.

Reverse an Effect

Select the Reverse button to apply the reverse motion of the variations to your path. The animated thumbnails display the effect in reverse order.

Stagger an Effect

With the Stagger option you can set each path in your animation to wait a certain number of frames before playing the 3D effect. For example, if you have seven paths and you set the stagger number to 5, the first path displays the effect at the start frame, the second path displays the effect 5 frames later, the third path displays the effect 5 frames later, and so on.

The Stagger option is unavailable until you enter a number greater than 1 in the count field, because this option only applies to an animation with more than one path in it.

Remove an Effect

Select the Remove Effect button to easily remove the effect from your animation.

Go Back

Select the Go Back button to return to the main 3D Effects folders.

Apply 3D Effects

1 Select a path by using one of the following methods.

- Use the Selection tool to select an object in the FX workspace. The entire path is automatically selected.
- Select the path name from the drop-down menu located to the left of the Attributes Palette.

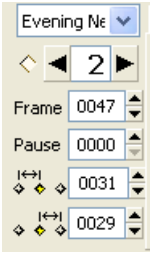


Figure 4-124. Path Selection

2 Switch to the 3D Effects tab.

3 Select an animated 3D effect thumbnail to display the pre-defined animated variations.

4 Select the Start, Over, or End to determine the position of the effect along the path. You need to set these display options before selecting the 3D variation.

5 Click on an animated variation to apply the 3D effect to the path.

6 Click on the Onscreen Preview button below the Tools palette to preview the effect.

Adjust Effect Duration

When you apply a 3D effect to your path, additional keyframes that contain the 3D effect information are added to the path. Depending if you apply the 3D effect to the start, end, or over the path determines whether the additional keyframes are added to the start, end, or throughout your path. When you adjust the duration of the 3D effect, you need to adjust the frames between these additional keyframes.

1 Select your path.

2 Switch to the Time tab.

3 Use the Keyframe field and arrows in the drop-down menu to select the second keyframe containing your 3D effect information.

The position of the keyframes containing the 3D effect information depends on whether you applied the effect to the start, end, or over the animation path.

- Additional keyframes are positioned at the start of the path if you applied the effect to the start of the path.
- Additional keyframes are positioned at the end of the path if you applied the effect to the end of the path.
- Additional keyframes are positioned throughout the path if you applied the effect over the path.

4 Adjust the value in the Frame field. Adjusting the frame value adjusts the frames between the selected keyframe and the preceding keyframe.

- Decrease the number in the Frame field to increase the speed between the selected keyframe and the preceding keyframe.
- Increase the number in the Frame field to decrease the speed between the selected keyframe and the preceding keyframe.

5 Select the next keyframe in the path and adjust the value in the Frame field. Continue to repeat this step until you have adjusted the frames between all of the keyframes containing your 3D effect information.

Render Animation

Rendering is the final step in creating an animation, but you can render an animation at any point. Rendering calculates all placement, shape, filter, time, and spline information for every frame in the animation and produces a .via file containing the information. There are several settings that can affect how the animation is rendered, as well as several ways of starting the render.

Include Paths in the Render

By default, all paths are included in the render. You can omit paths from the render using the Render Path option. This option is useful when you want to render for testing purposes, but previewing the animation on the computer screen does not provide enough information. You may only want to render the path you are working on. The Render Path checkbox is located on the Time tab. Each path in the animation has its own Render Path checkbox. Click the Render Path checkbox beside the path you want to omit from the render. When the checkbox is cleared, the path is not included in the render; when the checkbox contains an X, the path is included in the render.

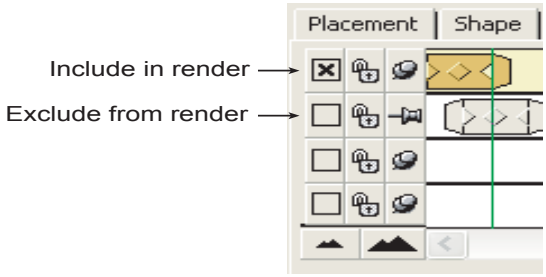


Figure 4-125. Render Path Option

Note: Keyframes located outside the FX workspace are not included in the render. This reduces render time and the amount of RAM consumed, but still produces the desired effect.

Render Options

There are three render options available in Animation Editor.

- Select Go > Render Animation to render the animation.
- Select Go > Take Last Rendered to take the last rendered animation even if changes have been made in the FX workspace since the last render.
- Press ENTER on number pad to render and take the animation. If no changes have been made since the last render, it only takes the animation without re-rendering it.

Render Engine

The render engine renders the animation frame by frame. As each frame is rendered, Animation Editor moves through the timeline and displays a rendered bitmap of each frame in Animation Editor. Render time depends upon the complexity, length, and number of paths in the animation.

Render from Sequencer

You can render from within Animation Editor, or you can wait until you go online to render. When you click the Online toggle button in Sequencer, the Render Engine launches and renders all previously unrendered animations. If your animations are particularly long or complex, this can cause a significant delay. To avoid this delay when going online, render your animations while in Animation Editor.

Render an Animation

After you have set the desired placement, shape, filter, spline, and time properties to the motion paths, you are ready to render your animation.

1 Select Go > Render Animation.

2 Press ENTER on the number keypad to take the animation to the program channel.

3 Switch to Sequencer, and select the animation in the Event List.

4 Click the Online toggle button to set TitleOne to online mode.

5 Open the Run tab in the Attributes Palette.

6 Click the Run Job button to initiate the series of takes.

Export and Import Files

Export and Import options for Animation Editor include importing and exporting templates for the template registry, importing FX Scripts for use in other Inscriber products, such as RTX, exporting the current frame as a still, exporting a series of still frames, exporting FX scripts, and exporting the entire animation. The export and import options are located on the File > Import/Export menu.

Import and Export Templates

Import and Export template buttons are located with the template management buttons on the Templates tab. Templates are saved in .ifx format at the time they are exported. Once imported into the template registry, you can update, rename, and delete templates. See "Motion Template Registry" on page 279 for details.

Open an Existing Animation

Animations are saved in .via format at the time of render. You cannot add a rendered file to an existing animation in Animation Editor, but you can open the rendered file in a new slot in the playlist. Switch to CG, click an empty slot in the playlist and select File > Import > Import Animation. You cannot edit a rendered animation file. To make changes, you need to locate the source .scribelist file where the animation was created. You can make changes in Animation Editor, then re-render the .via. Switch to Sequencer to set time code and trigger information.

Export an Animation

When you render an animation, a .via file is created. The Export Animation option located under the File menu in Animation Editor produces the same results as rendering, except that you can select a specific location for the animation file using the export option. Select a location and name for the file, then click OK. The Render Engine launches and the animation is rendered frame by frame.

Figure 4-126. Export Animation

Export and Import an FX Script

When you export an FX Script, the file is saved in .ifx format. You can then edit the script in any text editor, import the file into CG, or use it in Animation Editor.

Export a Series of Frames

You can export each frame in an animation as a single bitmap format file. The Export All Frames option saves the animation as a series of still images in the selected file format. Formats include .hkf, bmp .vii, .lgo, .tga, and .pict. Each frame is saved in the specified folder in sequential order. The series of images are named sequentially (as in the graphic to the right) and together comprise the animation. You can then use Via Builder or a third party application to rebuild the animation in a format readable for playback.

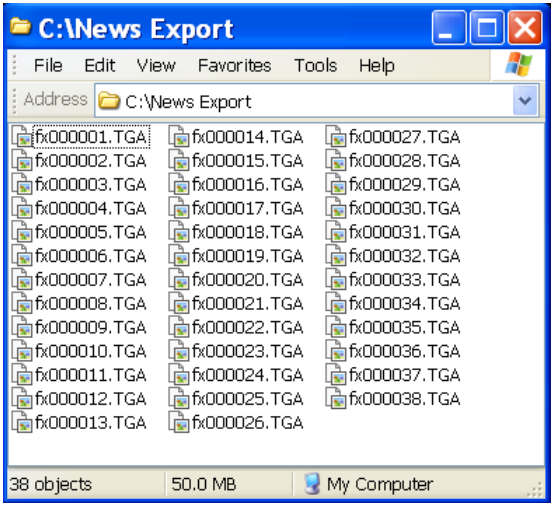


Figure 4-127. Exported Frame Folder

Export a Single Frame

If you like the way an animation looks at a particular frame, you can save that single frame for use as a background or texture. The Export Current Frame option saves the frame in the selected an image format. Use the Time Slider on the Preview toolbar to move to the target frame in time, then select File > Import/Export > Export Current Frame.

The Save As dialog opens and you can select the location, file type, and bit depth for the image. Formats include .hkf, .bmp, .rle, .vii, .lgo, .tga, and .pict.

Chapter 5

Sequencer

Manage your events for output in Sequencer.

Introduction to Sequencer

Use Sequencer to manage, edit, and output your playlist. You can prepare your playlist for output in Sequencer by applying transitions, duration, audio, alpha masks, and trigger types to your events. If you have a large playlist, you can group your events into separate sequences or by layout type to make playback easier.

Switch to Sequencer

Switch between tools using the buttons on the toolbar or the options on the Tools menu.

To switch to the Sequencer tool, use one of the following methods.

- On the toolbar, click the Sequencer button.
- Select Tools > Sequencer (F11).

Interface Overview

The Sequencer interface includes the following components.

- Playlist/Sequencer Playlist
- Sequencer toolbar
- Sequencer Attributes tabs
- Scrapbook
- Shot Box palette
- Program/Preview palette

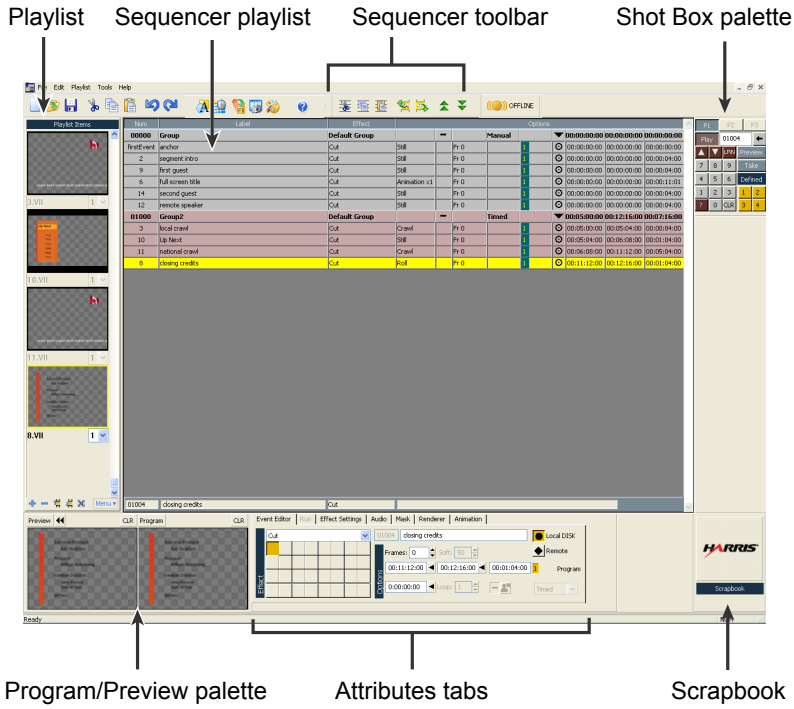


Figure 5-1. Sequencer Workspace

Playlist vs. Sequencer Playlist

Both the playlist and the Sequencer Playlist contain the events for the current project in the order that they are output. When you select or move events in the playlist, the events are also selected and moved in the Sequencer playlist.

- Playlist: You can add events to the playlist from all TitleOne tools and arrange the event output order.
- Sequencer Playlist: You can arrange the event output order, display the playlist output details, and apply output controls.

Sequencer Toolbar

The Sequencer toolbar includes options for editing and viewing events.

Table 5-1. Sequencer Toolbar Buttons

Button	Description
	Cut Event: Removes the selected event from the playlist. You can paste the event in a new location, or leave the event deleted from the playlist.
	Copy Event: Creates a duplicate of the selected event. The original event remains in the playlist. You can paste the duplicated event in a new location in the playlist.
	Paste Event: Pastes the cut or copied event below the currently selected event.
	Log Event Up: Adds a blank event above the currently selected event in the playlist.
	Log Event Down: Adds a blank event below the currently selected event in the playlist.
	Collapse Sequence Display: Hides the events and only displays the group headers in the Sequencer playlist. The playlist displays a thumbnail of the first event in each group.
	Expand Sequence Display: Shows all events and group headers in the current playlist. The playlist displays a thumbnail of all the events in the Sequencer playlist.

Sequencer Attributes Tabs

The Sequencer Attributes tabs include the Event Editor, Run, Effect Settings, Audio, Mask, Renderer, and Animation tabs.

Table 5-2. Sequencer Attributes Tabs

Tab	Description
Event Editor	Sets the event name, transition, in and out points, duration, board assignment, render location, and group trigger.
Run	Outputs the events in the playlist and monitors output activity. You must be online to access the Run tab. Press CTRL+SHIFT+O to switch to online mode.
Effect Settings	Sets output display options for rolls and crawls, including speed, timing, borders, and margins. You can also use the Effect Settings tab to select an export option for animation events. The animation export option determines how the layout objects are grouped in the Animation Editor.
Audio	Applies an audio file to the selected event.
Mask	Selects an alpha mask to display over the selected event.
Renderer	Sets the selected animation event to display in real-time when you select the Hardware Acceleration option.
Animation	Sets an animation file to play as a transition with the selected event.

Scrapbook

The Scrapbook is temporary holding place for layouts, frame grabs, styles, library items, media, and other TitleOne elements. You can easily add items stored in the Scrapbook to the playlist.

To use a Scrapbook item in the playlist:

1 Select an empty slot in the playlist.

2 Use the scrollbar below the Scrapbook to display the item.

3 Right-click on the item and select Use. The Scrapbook item is added to the playlist as an event.

To add an event to the Scrapbook:

1 Select the event in the playlist.

2 Right-click on the Scrapbook.

3 Select Add from the right-click menu. The event is added to the Scrapbook.

Shot Box Palette

You can use the Shot Box to select playlist events in Sequencer.

To select an event with the Shot Box:

1 Open the Preferences dialog, select File > Preferences.

2 To display event numbers in the playlist, switch to the Project tab and clear the Show Filename in Job Strip checkbox.

When this checkbox is cleared, the event numbers display in the playlist rather than the file names.

3 To close the Preferences dialog, click OK.

4 On the Shot Box palette, click the Store/Play toggle button to read Play.

Feature Note	When the Store/Play button reads Store, you can work with files in the Media Store module. Media Store is a purchase option in TitleOne.

5 Enter the event number in the Shot Box Number field. If the event number is 00003, you can enter 3.

6 To select the event, press ENTER on the main keyboard — not the number pad ENTER key.

Note: If you press the number pad ENTER key, the layout plays on the program channel. The number pad ENTER key immediately outputs the selected layout.

7 Use one of the following methods to preview or play the event.

- To preview the event, click the Preview button on the Shot Box palette.
- To play the event, click the Take button on the Shot Box palette.

Program/Preview Palette

The Program/Preview palette controls output to individual channels. A thumbnail of the currently setup event displays on the Preview palette. A thumbnail of the currently playing event displays on the Program palette.

Note: The preview channel is not available in TitleOne Offline.

You can use the Program/Preview palette to complete the following actions.

Table 5-3. Program/Preview Channel Actions

Action	Description
Preview	To preview the selected event, drag the event to the Preview palette.
Output	To output the selected event, drag the event to the Program palette. You can also press ENTER on the number pad.
Clear Screen Content	To clear the program channel or preview channel, click the CLR button above the palette.

Organize the Playlist

Use the TitleOne tools to add events to your playlist, and then use Sequencer to organize your events into a sequence for output. When you organize the playlist in Sequencer you can name events, add new events, and change the event order.

Create a Playlist

You can add events to the playlist from CG or Animation Editor. Once you add events to the playlist use the options in Sequencer to prepare your events for output.

Table 5-4. TitleOne Tools and Playlist Functionality

TitleOne Tool	Playlist Function
CG	Adds stills, rolls, crawls, and animations to the playlist. Select an empty slot in the playlist, and then create your layout in the CG workspace. The current layout fills the selected slot in the playlist. Selecting a new slot clears your CG workspace and allows you to add a new layout to the playlist.
Animation Editor	Adds animation effects to the layout you created in CG. After you create the animation layout in CG, select the layout in the playlist and switch to the Animation Editor to animate the layout.

Name Events

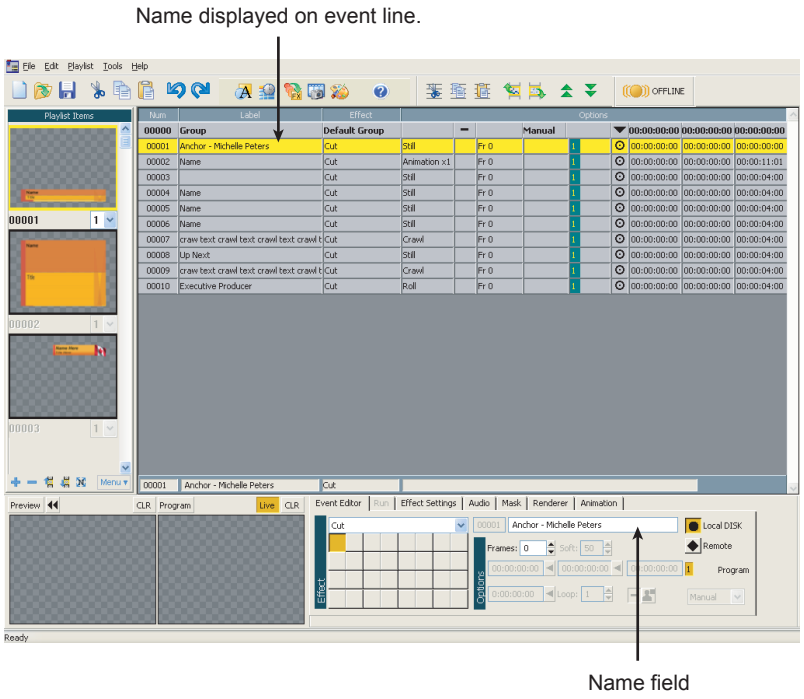
Once you add events to the playlist, switch to Sequencer to start organizing the playlist for output. To help identify events in the Sequencer Playlist, use the Event Editor tab to name your events.

1 In Sequencer, select the event line in the Sequencer playlist.

2 Switch to the Event Editor tab.

3 In the Name field, enter a name for the event.

4 Press ENTER to apply the name. The name displays on the event line.



Edit Playlist Options

You can access the playlist edit options in the following locations:

- Playlist menu
- Playlist toolbar
- Playlist right-click menu

- Sequencer toolbar
- Sequencer right-click menu

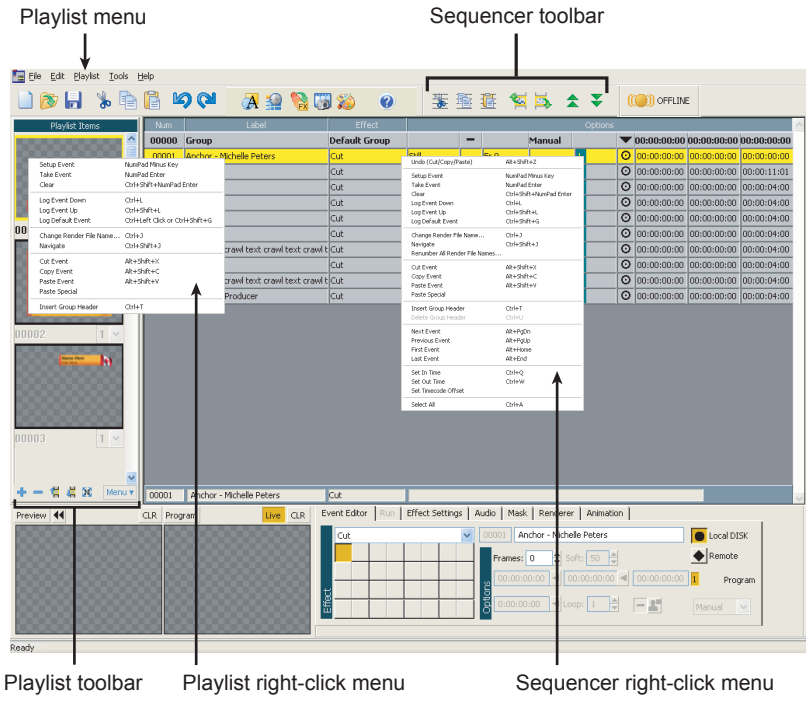


Figure 5-2. Playlist Edit Options

Add New Events

You can add a new event to your playlist using the Log Event Up and Log Event Down options.

1 Select the event in the playlist.

2 Add a new event either above or below the selected event.

- To add an event above, click the Log Event Above button.
- To add an event below, click the Log Event Below button.

TitleOne adds the default event to the playlist, which is generally a blank event.

Note: In CG, you can update the default event by adding your images and graphics to the default event and then clicking the Update button in the Template Manager (CTRL+SHIFT+R).

Delete Events

Use the Cut Event option to delete an event from the playlist. When you cut an event the event is removed from the playlist. You can paste the event in a new location or leave the event deleted from the playlist.

1 To delete an event, select the event in the playlist.

2 Right-click the event and select the Cut Event option.

Arrange Events

To move events in the playlist use the cut, copy, and paste options; or drag the events to a new location in the playlist.

Move Events

Use the cut and paste options to move an event to a new location in the playlist.

1 To move an event to a new location, select the event in the playlist.

2 Right-click on the event and select the Cut Event option. The event is removed from the playlist.

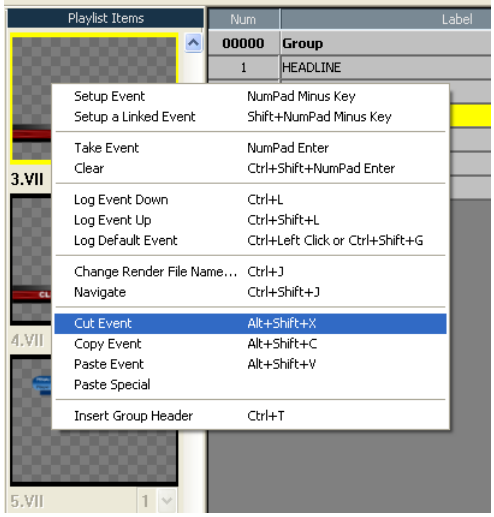


Figure 5-3. Cut Event Option

3 Select the event in the playlist that will proceed the pasted event.

4 Right-click on the event and select the Paste Event option. The event is pasted below the selected event.

Duplicate Events

Use the copy and paste options to duplicate an event in the playlist.

1 To add a duplicate of an event in the playlist, select the event.

2 Right-click on the event and select the Copy Event option.

3 Select the event in the playlist that will proceed the pasted event.

4 Right-click on the event and select the Paste Event option. The duplicated event is pasted below the selected event.

Drag Events in the Playlist

To quickly reorder the playlist, drag the event up or down to a new location. When you drag an event, you can move a copy of the event or move the original event to a new slot.

- To move a copy of the original event, click and drag the event to a new location in the playlist. When you drag an event, the original event stays in its initial position and a copy is placed in the playlist.
- To move the original event, hold down CTRL when you click and drag the event. The event is deleted from its old position once it is inserted in the new slot.

The cursor determines how the event is placed in the playlist. See the following table for details.

Table 5-5. Playlist Cursor

Cursor	Description
	Places the selected event above the current event.
	Places the selected event below the current event.
	Replaces the current event with the selected event.

Set Up Long Rolls and Crawls

To output long rolls and crawls smoothly, Sequencer allows you to separate your roll/crawl into multiple pages (or events). In Sequencer, the multi-page roll/crawl displays as a separate group, with each page displayed as a separate event. During playback the multi-page roll/crawl plays as one smooth event.

Create Multi-Page Rolls

Multi-page rolls, also called page-formatted rolls, allow you to easily create and navigate long rolls. All events in the multi-page roll are rendered to disk and then played out as one smooth continuous roll. The output plays back unbroken, but each page is actually an individual event in the playlist. Creating multi-page rolls requires both the CG and Sequencer tools.

1 In CG (Tools > CG), select an empty slot in the playlist.

2 Select Roll from the Title Type list.

3 Enter the text for the first page of your roll in the CG workspace.

4 For each subsequent page of your roll:

   a Select the next empty slot in the playlist.

   b Select Roll from the Title Type list.

   c Add your text and graphics to the layout.

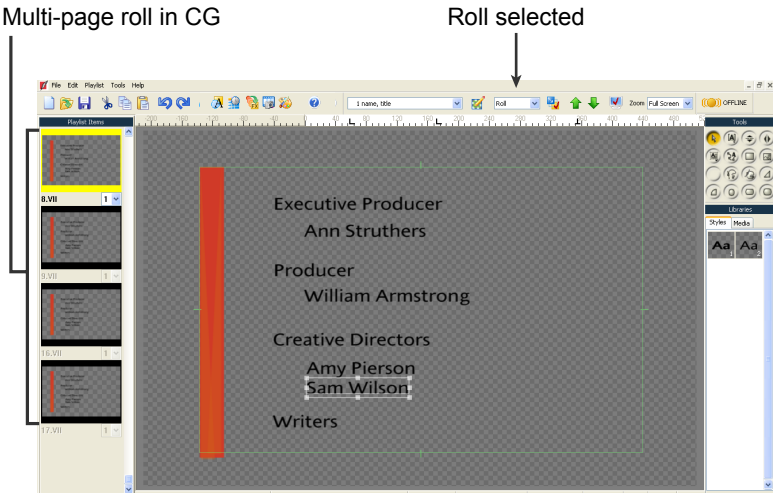


Figure 5-4. Multi-page Roll Set Up in CG

5 Switch to Sequencer (Tools > Sequencer).

6 Select the first event you want included in your multi-page roll.

7 Select Edit > Insert Group Header. The group header is inserted above the selected event.

All the events that fall between the new group header and the next header belong to the same group.

8 On the group header, right-click on the column heading Default Group and select Page Formatted Rolls. All of the events in your group are immediately converted to a page formatted roll. You can only insert roll events into the Page Formatted Roll group.

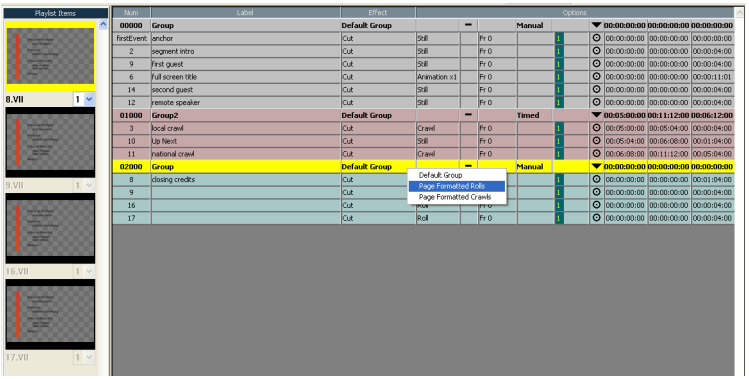


Figure 5-5. Select Page Formatted Roll in Sequencer

When you output the playlist, all events in the Page Formatted Roll group are rendered to disk and then played-back as one smooth continuous roll.

Note: If your roll events have backgrounds, the background from the first event is used as the background for the whole Page Formatted Roll group.

Adjust Roll Timing

The Equalize Timing option on the Effect Settings tab sets all roll pages to equal the same length as the longest roll. When you check the Equalize Timing checkbox, each roll page displays for the same length of time on-screen.

1 Select an event in the Page Formatted Roll group to determine which group receives the formatting.

2 Switch to the Effect Settings tab.

3 Click the Global Settings button.

4 Check the Equalize Timing checkbox to display each roll event for the same length of time.

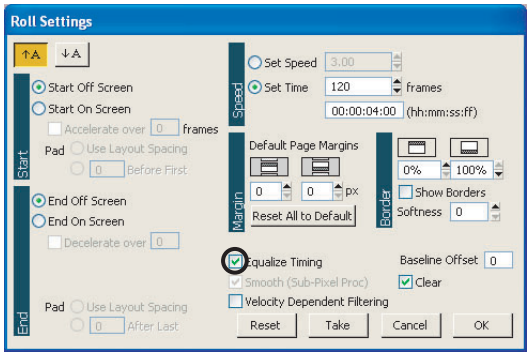


Figure 5-6. Select the Equalize Timing Checkbox

Create Multi-Page Crawls

Multi-page crawls, also called page-formatted crawls, allow you to easily create and navigate long crawls. All events in the multi-page crawl are rendered to disk and then played back as one smooth continuous crawl. The output plays back unbroken, but each page is actually an individual event in the playlist. Creating multi-page crawls requires both the CG and Sequencer modules.

1 In CG (Tools > CG), select an empty slot in the playlist.

2 Select Crawl from the Title Type list.

3 Enter the text for the first page of your crawl in the CG workspace.

4 For each subsequent page of your crawl:

   a Select the next empty slot in the playlist.

   b Select Crawl from the Title Type list.

c Add your text and graphics to the layout.

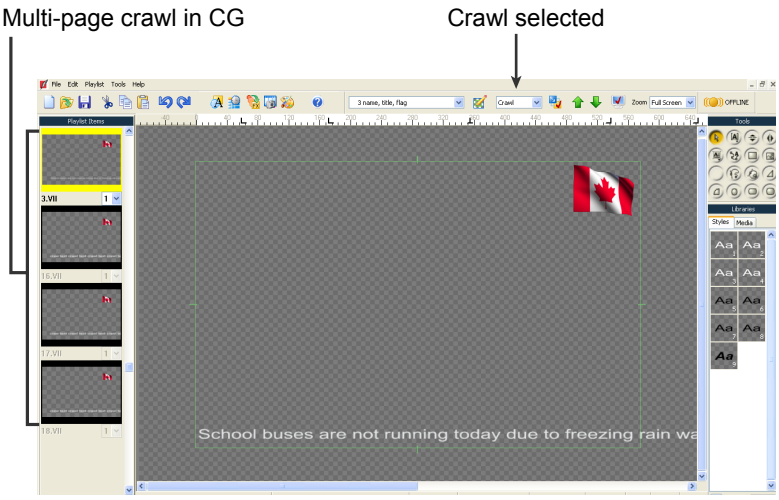


Figure 5-7. Multi-page Crawl Set Up in CG

5 Switch to Sequencer (Tools > Sequencer).

6 Select the first event you want included in the your multi-page crawl.

7 Select Edit > Insert Group Header. The group header is inserted above the selected event.

All the events that fall between the new group header and the next header belong to the same group.

8 On the group header, right-click on the column heading Default Group and select Page Formatted Crawls. All of the events in your group are immediately converted to a page formatted crawl. You can only insert crawl events into the Page Formatted Crawl group.

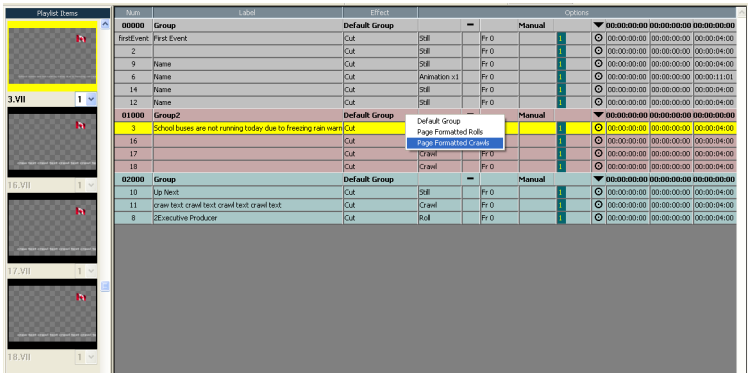


Figure 5-8. Select Page Formatted Crawls in Sequencer

When you output the playlist, all events in the Page Formatted Crawl group are rendered to disk and then played back as one smooth continuous crawl.

Note: If your crawl events have backgrounds, the background from the first event will be used as the background for the whole Page Formatted Crawl group.

Adjust Crawl Timing

The Equalize Timing option on the Effect Settings tab sets all crawl pages to equal the same length as the longest crawl. When you check the Equalize Timing checkbox, each crawl page displays for the same length of time on screen.

1 Select an event in the Page Formatted Crawl group to determine which group receives the formatting.

2 Switch to the Effect Settings tab.

3 Click the Global Settings button.

4 Check the Equalize Timing checkbox to display each crawl event for the same length of time.

Set Roll and Crawl Output Options

Sequencer includes output options for your rolls and crawls. Use the Effect Settings to adjust the on-screen borders, start position, and output speed.

Adjust Roll and Crawl Borders

Roll and crawl layouts have border options that set the output area of the layout. Use the Effect Settings tab to set the borders for the current event.

1 Select the roll or crawl in the Sequencer playlist.

2 Switch to the Effect Settings tab.

3 Click on the Global Settings button and then check the Show Borders checkbox.

4 Adjust the border settings for your layout.

- Roll Layouts: Adjust the values in the Top and Bottom fields in the Global Settings dialog.
- Crawl Layouts: Adjust the value in the Left and Right fields in the Global Settings dialog.

5 Enter a number in the Softness field to add a fade area to your roll or crawl layout. For example, if you add a softness value to your roll borders the roll will fade in from the bottom border and fade out into the top border.

6 To hide the border markers, clear the checkbox.

Start Roll/Crawl On Screen or Off Screen

You can set whether your roll or crawl starts on- or off-screen.

1 Select the roll or crawl event in the Sequencer playlist.

2 Switch to the Effect Settings tab and click on the Global Settings button.

3 Select the Start Off Screen or Start On Screen radio button.

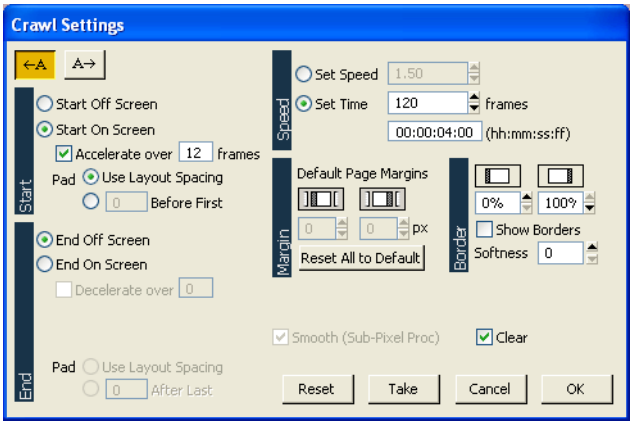


Figure 5-9. Set Your On-Screen/Off-Screen Options

If you start the event on-screen you can set the following options.

- To increase the speed of the roll/crawl, check the Accelerate checkbox and enter the number of frames it takes for the event to accelerate in the Frames field.
- To set where the roll/crawl starts on-screen use the Pad options.

  Select the Use Layout Spacing radio button to start the text at the existing edge of the layout. If you are adjusting a multi-page crawl TitleOne uses the left edge of the first crawl layout, or the top edge of the first roll layout.

  Select the Before First radio button to set an edge independent of the layout spacing. Enter the edge value in the Before First field.

4 Select the End Off Screen or End On Screen radio button.

Adjust Roll/Crawl Speed

To adjust the speed of your roll or crawl, you can set the amount of time it takes to display the event, or you can set a speed value.

1 Select the roll or crawl event in the Sequencer playlist.

2 Switch to the Effect Settings tab.

3 Select the Set Speed radio button and enter a value in the Set Speed field.

- The smaller the speed value the slower the playback.
- The greater the speed value the faster the playback.

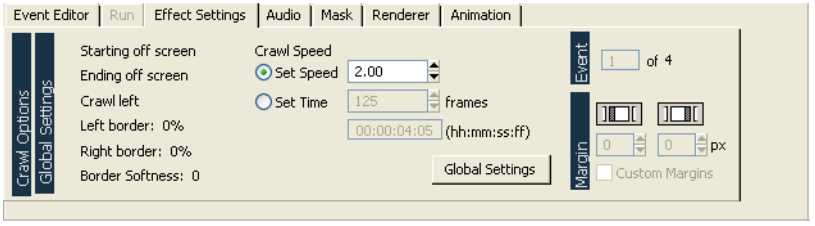


Figure 5-10. Speed Options

4 To set the amount of time it takes to display the roll/crawl, select the Set Time radio button.

5 Enter the duration of time using one of the follow options.

- In the Frames field enter the duration as a total number of frames.
- In the hh:mm:ss:ff field enter the duration in hours:minutes:seconds:frames.

Prepare Events for Output

Before you output your events you can apply transitions, audio, and set the event duration using the Attributes tabs in Sequencer. Sequencer also includes real-time playback and loop options.

Apply Transitions

Transitions determine how still events appear on-screen. When you select a transition from the drop-down list any related transition options become available.

For example, if you select the Wipe transition the directional buttons display and the duration and softness options also become available.

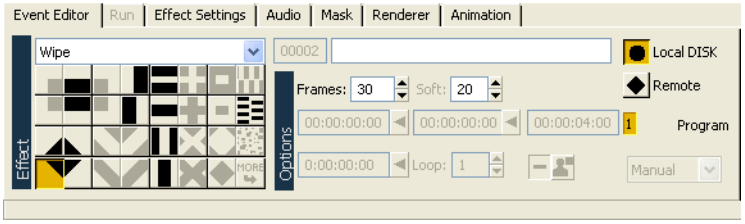


Figure 5-11. Transition Options

The transition options are available on the Event Editor tab.

Table 5-6. Transition Types

Transition	Description
Cut	Displays the entire event instantly. The cut transition is the default option.
Wipe	Gradually wipes the event on-screen in the selected direction. Wipe transitions include directional options, duration (Frames field), and transition softness (Soft field).
Tile	Reveals the event one square at a time. Tile transitions include directional options, duration (Frames field), and transition softness (Soft field).

Table 5-6. Transition Types

Transition	Description
Organic	Reveals the event using one of 32 pre-defined transition effects. Organic transitions include numbered buttons that you use to select the effect. Duration (Frames field) and transition softness (Soft field) options are also available.
Dissolve	Fades the event on-screen until the event is fully displayed. Dissolve transitions include the duration option (Frames field).
Push	Moves the event on-screen in a specific direction. Push transitions include the directional and duration (Frames field) options.

Select Transition

To select a transition for your event, complete the following steps.

1 Select your event in the Sequencer playlist.

2 Switch to the Event Editor tab.

3 Select a transition from the Transition drop-down list. The transition is applied to the selected event.

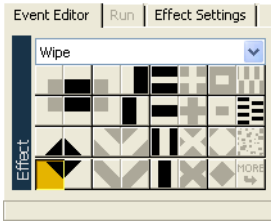


Figure 5-12. Transition List

4 Set the options that are available for the selected transition.

Table 5-7. Transition Options

Option	Description
Directional buttons	Determines where the event starts to appear on the screen. Look at the button to see how the transition displays on-screen. The event will appear in the dark area first and spread to the light area. For example, the directional button will start the transition in lower-left corner and spread diagonally to the upper-right. Available for wipe, tile, and push transitions. **Note:** The available buttons change depending on the selected transition.
Numbered buttons	Determines which transition effect is applied to the selected event. Available for organic transitions.
Frames field	Sets how many frames it takes to display the entire transition. Available for all transitions.
Soft field	Sets how blurred the edges of the transition appear on output. Increase the value to increase the softness. Available for wipe, tile, and organic transitions.

Apply an Animation Transition

The Animation tab allows you to select an animation file to play as your transition during output.

1 Select an event in the Sequencer playlist for your animation.

2 Switch to the Animation tab.

3 Click the Browse button.

4 In the Open dialog, navigate to and select your animation file.

5 Click Open.

Figure 5-13. Animation Transition Options

6 To delay the animation transition from the start of the event, enter the number of seconds in the Offset field.

During output the animation plays as the transition for the selected event.

Use Global Transitions

Global transitions allow you to save a set of four transitions as one file, and apply the transitions to different events. You can apply the transitions to events in any playlist.

Create a Global Transition File

To create a global transition file, you need to save the first transition as a .trn file. After the initial transition is saved, you can easily define the three remaining transitions that are automatically saved with the file.

1 Select the event in the Sequencer playlist with the transition you want to save.

2 Right-click on the event and select Set Event As Default Transition > Transition 1 from the right-click menu.

3 In the Save dialog, save the transition. The transition is saved as a .trn file. After the first transition is saved, any transitions set for Transition 2, Transition 3, or Transition 4 are automatically saved with this file.

4 Right-click on another event with a transition you want to save as Transition 2.

5 From the right-click menu select Set Event As Default Transition > Transition 2 from the right-click menu. The transition is automatically saved as Transition 2 in the saved file.

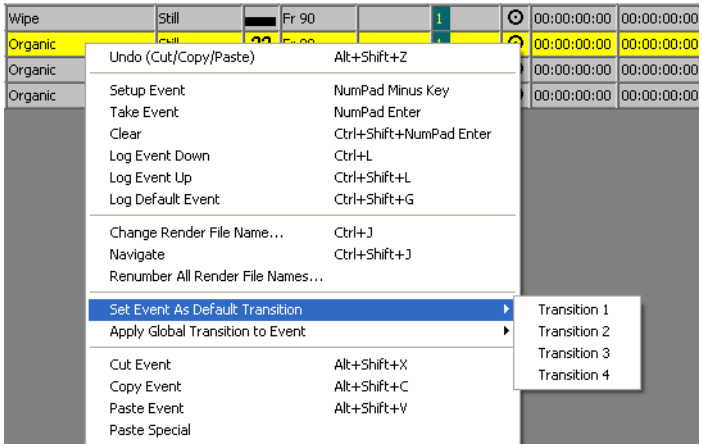


Figure 5-14. Set Event As Default Transition Option

6 Use the right-click menu to set transitions for Transition 3 and Transition 4 option.

Apply the Global Transitions

After you have set up your global transition file, you can apply the transitions to events in the current playlist or a new playlist.

1 Select an event in the Sequencer playlist.

2 Right-click the event and select Apply Global Transition to Event.

3 From the submenu select the transition you want to apply: Transition 1, Transition 2, Transition 3, or Transition 4.

After you select the option, the transition is applied to the event.

Save a New Set of Global Transitions

You can create multiple .trn files that save a set of four global transitions.

1 To start a new global transition file, select File > Export > Global Transition File.

2 In the Save As dialog, enter a name for the new global transitions file.

3 To define your new transitions, right-click the event with the transition and select Set Event As Default Transition > Transition I from the right-click menu.

4 Use the right-click menu to save transitions for Transition 2, Transition 3, and Transition 4.

The transitions are automatically saved with the new global transition file. You can apply the new transitions to any event in any playlist.

Switch between Global Transition Files

After you create multiple global transition files, you can open the files and apply the saved transitions to events.

1 To open a global transition file, select File > Import > Global Transition File.

2 In the Load Transition File dialog, select the .trn file you want to use and then click Open. The selected file is automatically loaded.

3 To apply a transition from the new file, select an event in the Sequencer playlist.

4 Right-click on the event select Apply Global Transition to Event.

5 From the submenu select the transition you want to apply: Transition I, Transition 2, Transition 3, or Transition 4.

After you select the option, the transition is applied to the event.

Apply Audio to Events

You can assign a disk-based audio file to any event in Sequencer using the options on the Audio tab.

Feature Note Audio is an option in TitleOne.

1 Select the event in the Sequencer playlist.

2 Switch to the Audio tab.

3 Click the Browse button to select an audio file for the event.

4 Use the Offset field to delay the start of the audio file from the beginning of the event. Time is measured in hh:mm:ss:ff.

5 Use the Duck Input field to duck the pass-through audio (decrease the volume of the output video). In the Duck Input field, decrease the audio by a set number of decibels. The audio level decreases when the event is playing.

6 To remove the audio, click the Reset All to Default button.

Note: For information on setting audio options, see "Configure Your XD-200 Boards" on page 30.

Apply an Alpha Mask

You can select an image or video file to use as a mask. The mask displays over the selected event during output. The selected event displays through the alpha of the selected file.

1 Select the event in the Sequencer playlist.

2 Switch to the Mask tab.

3 Click the Browse button to select the mask file for the event.

4 If the image is in color, use the Channel drop-down list to select which pixel color(s) are converted to transparent.

- alpha (for 32-bit images)
- luminance (red, green, and blue)
- red
- green
- blue

5 To remove the mask, click the Reset All to Default button.

Note: For the mask effect to display on-screen, you must output from Sequencer.

Set Real-Time Animation Playback

The Renderer tab includes a hardware acceleration option for animation events. The option allows you to broadcast your animations in real-time without having to render them to a .via file first.

Feature Note Hardware acceleration is a purchase option in TitleOne.

1 Switch to the Renderer tab.

2 Select the Use Hardware Acceleration checkbox.

When you take your layout, your animations will be broadcast directly to air.

If your animation is particularly complex, it may not playback smoothly in real-time.

Note: Some filters and blur effects from the Animation Editor may appear differently than what you are used to if you select the hardware acceleration option.

Loop the Animation

You can set your animation events to loop during playback. When you loop your animation, the animation event repeats the set number of times before the next event plays.

1 Select your animation event in the Sequencer playlist.

2 Switch to the Event Editor tab.

3 Enter the number of loops for your animation in the Loop field.

The Loop value represents the total number of times that the animation will play. For example, if you want your animation to play 3 times, enter the number 3.

Group Events

You can use groups to organize events into categories, and to apply the trigger information for the events in the group. The trigger applies to all the events in a group.

1 Select the first event you want included in the new group.

2 Select Playlist > Insert Group Header (CTRL+T). The group header is inserted above the selected event.

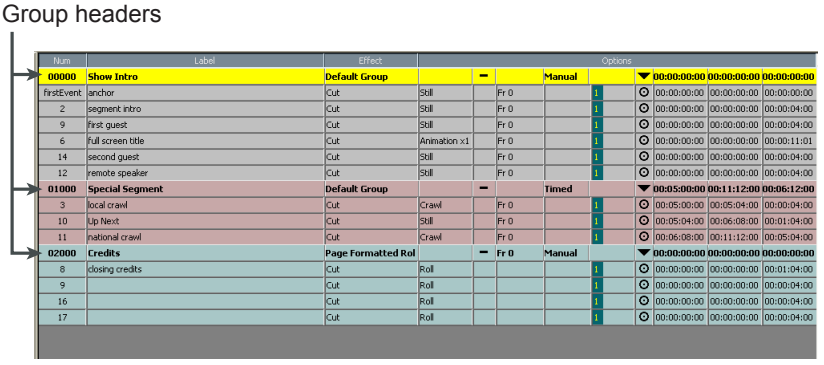


Figure 5-15. Group Headers in Sequencer Playlist

All the events that fall between the new group header and the next header belong to the same group.

Name Groups

To help identify your groups, you can name your groups using the options on the Event Editor tab.

1 Select your group header.

2 Switch to the Event Editor tab.

3 Enter the group name in the Label field.

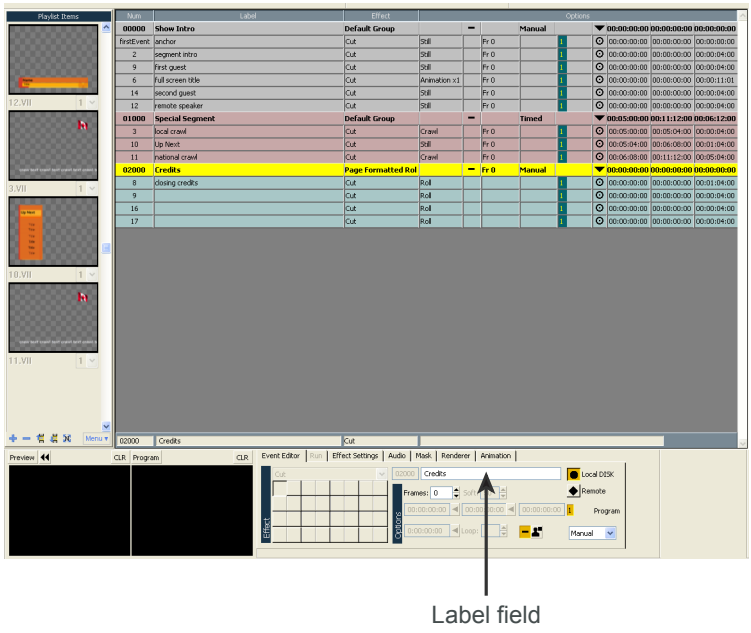


Figure 5-16. Name the Group Header

4 Press ENTER on the main keyboard (not the ENTER key on the number pad). The group header is labeled in the Sequencer playlist.

Note: Pressing the ENTER key on the number pad triggers output.

Delete Group Headers

You can use the option on the Playlist menu to remove a group header from the playlist, When you remove a group header, the events become part of

the group above.

If you only have one group header in the playlist you cannot delete the header.

1 To delete a group header, select the header in the playlist.

2 Select Playlist > Remove Group Header (CTRL+U).

Event Duration

The Event Editor tab includes the options for setting your event duration. Duration is set for individual events, not for the entire group. Events play sequentially based on their in and out points.

Event duration is dependant on the trigger type selected for the group. The In Point and Out Point fields are available for the Timed, Time Code, and PC Clock trigger types. Operators determine the event duration for the Manual and GPI triggers so you do not set a duration for these trigger types.

- Timed triggers are based on a start time of 00:00:00:00. If you want to play your first event for 30 seconds, you would enter 00:00:00:00 as your in point and 00:00:30:00 as your out point.
- Time Code triggers are based on the time code device you use. Base your in and out points on the format the time code device uses.
- PC Clock triggers are based on your system clock and use the 24-hour format. If you wanted to play your first event for 30 seconds starting at 6:00 PM, you would enter 18:00:00:00 as your in point and 18:00:30:00 as your out point.

For more details on trigger types, see "Select a Trigger for Output" on page 337.

Set Event Duration

To set the event duration for time-based triggered events, complete the following steps.

1 Select the first event in the group.

2 On the Event Editor tab, enter a start time for the event in the In Point field. Time is measured in HH:MM:SS:FF (hours:minutes:seconds:frames).

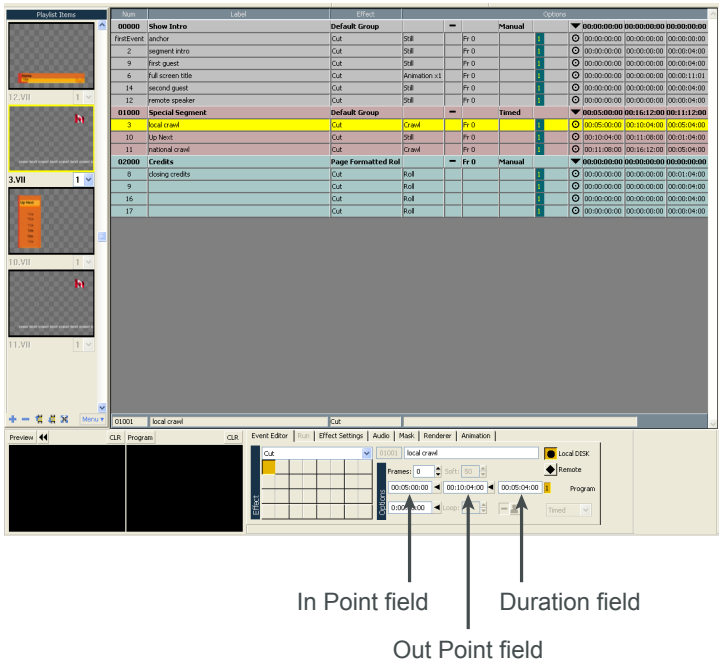


Figure 5-17. Event Timing Fields

3 Enter an end time for the event in the Out Point field. Time is measured in HH:MM:SS:FF.

The timing fields update in the playlist.

4 Continue setting the duration for each event in the group. The timing fields update on the event lines and in the group header.

Add Space Between Events

The options in Sequencer do not allow for spaces between events. Once the event out point is reached during playback the event is removed from screen and the next event displays.

To add a space between events you can use a blank event.

1 Select the event in the playlist that will come before the blank event.

2 Right-click on the event and select the Log Event Down (CTRL+L) option.

A blank event is added below the selected event.

3 Select the blank event and switch to the Event Editor tab.

4 If you are using a time-based trigger, use the In Point and Out Point fields to set the duration of blank event. Time is measured in HH:MM:SS:FF.

Select a Trigger for Output

Trigger types control how you output your playlist once you go online. The trigger type applies to all the events in a group.

Trigger Types

TitleOne includes five trigger types for controlling output: Manual, Timed, GPI, Time Code, and PC Clock.

Table 5-8. Available Trigger Types

Trigger	Description
Manual	Waits for an operator to press the SPACEBAR to trigger the next event. The current event remains on-screen until the next event is triggered.
Timed	Plays each event sequentially for the set duration. Once Sequencer reaches the event in point, the event is triggered. The Timed trigger starts the clock at 00:00:00:00.
GPI Trigger	Waits for an operator to press the external GPI button to trigger the next event. The current event remains on-screen until the next event is triggered.
Time Code	Uses an external time code source to trigger events. When the time code source reaches the event in point, the event is triggered.
PC Clock	Uses the system clock to trigger events. When the system clock reaches the event in point, the event is triggered.

Trigger Type Menus

You can select a trigger from the Trigger Type drop-down list on the Event Editor tab, or the group header right-click menu.

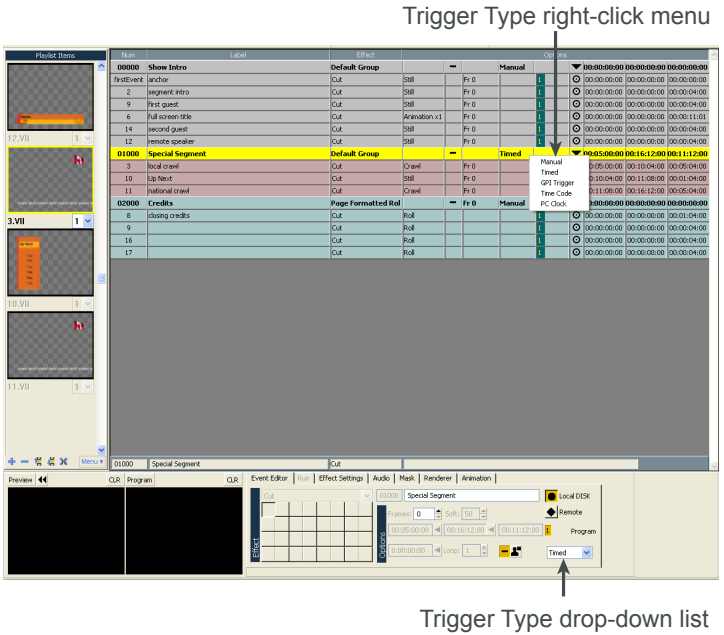


Figure 5-18. Trigger Type Menus

Use the Manual Trigger

The Manual trigger type allows an operator to manually trigger each event using the SPACEBAR.

Select the Manual Trigger

Use the options on the group header or the Event Editor tab to select the Manual trigger.

1 Select the group header.

2 Select the trigger using one of the following methods.

- On the group header, right-click on the current trigger and select Manual from the right-click menu.
- On the Event Editor tab, select Manual from the Trigger Type drop-down list.

Output with a Manual Trigger

Once you move the playlist online, use the SPACEBAR to manually trigger each event.

1 To go online, press CTRL+SHIFT+O. You are prompted to save your playlist if you have not saved yet.

   Once all the events are rendered and moved online, the Run tab becomes available.

2 Select the group header containing the events you want to output.

3 Switch to the Run tab.

4 Click the Run Job button to start the output.

5 Press the SPACEBAR to trigger your event. The event plays on the program channel.

6 Continue to output the remaining events using one of the following methods.

   - To immediately play the next event, press the SPACEBAR. The current event is cleared from screen and the next event plays.
   - To clear the screen before playing the next event, click the CLR button above the Program palette (or press CTRL+SHIFT+ENTER). Press the SPACEBAR to play the next event.

Use the Timed Trigger

The Timed trigger sequentially plays each event for the set duration. During output the clock starts at 00:00:00:00.

Select the Timed Trigger

Use the options on the group header or the Event Editor tab to select the Timed trigger.

1 Select the group header.

2 Select the trigger using one of the following methods.

   - On the group header, right-click on the current trigger and select Timed from the right-click menu.
   - On the Event Editor tab, select Timed from the Trigger Type drop-down list.

Output with a Timed Trigger

Once you move the playlist online, you can start playback.

1 To go online, press CTRL+SHIFT+O. You are prompted to save your playlist if you have not saved yet.

   Once all the events are rendered and moved online, the Run tab becomes available.

2 Select the group header containing the events you want to output.

3 Switch to the Run tab.

4 Click the Run Job button. Each event in the group plays sequentially for the set duration.

Use the GPI Trigger

The GPI trigger type allows an operator to manually trigger each event using an external GPI button press. You can use two types of GPI triggers.

- A trigger connected to the GPI/O port on your system.
- A trigger connected to a COM port.

Set Up a GPI/O Trigger

To set up a GPI/O trigger, you need to connect the GPI device to the GPI/O port on the back of your system.

Note: The GPI/O is enabled during the installation of the TitleOne application by default. If the GPI/O is not currently enabled on your system, you must uninstall TitleOne and then reinstall the software with the U2IO option selected.

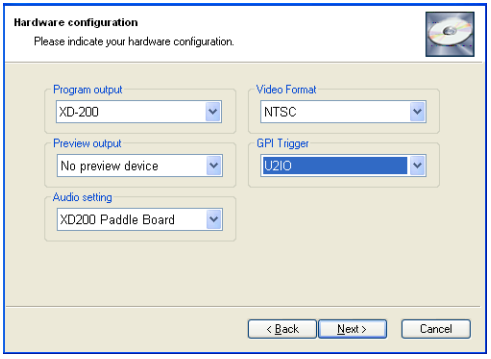


Figure 5-19. U2IO Selected to Enable GPIO Trigger

1 To set up a GPI/O trigger, connect your device to the GPI/O port on the back of your system.

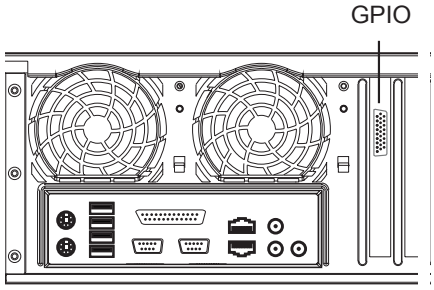
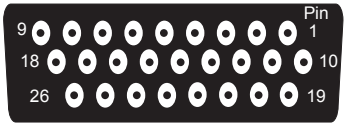


Figure 5-20. GPI/O Connection

2 Review the following illustration for the proper pinouts.



Pins 1 - 9	Pins 10 - 18	Pins 19 - 26
1: GPI 1	10: GPI 6	19: GPI 10
2: GPI 2	11: GPI 7	20: GPI 11
3: GPI 3	12: GPO 4	21: GPO 9
4: GPI 4	13: GPI 9	22: GPI 14
5: GPI 5	14: GPI 8	23: GPI 13
6: GPO 1	15: GPO 5	24: GPI 12
7: GND	16: GPO 6	25: VCC - MPU
8: GPO 2	17: GPO 7	26: GPO 10
9: GPO 3	18: GPO 8	

Figure 5-21. DB26 Female High Density Connector

The GPI inputs are TTL. The GPI/O device expects TTL transition from HIGH to Low to initiate GPI trigger. GPI triggers can be initiated by using passive switch, or relay with normally open contacts.

GPI inputs 9-14 have no internal pull-up resistors. If passive switching is required for GPI inputs 9-14 the pull-up resistors must be added externally as indicated in the following diagram.

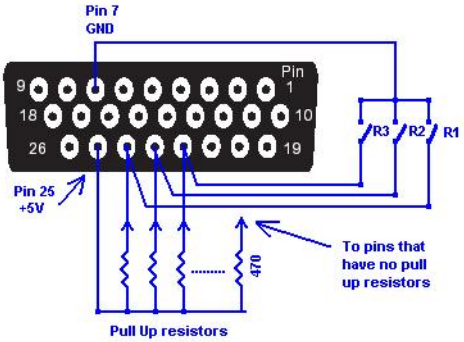


Figure 5-22. GPI Passive Switch Connection

Set Up Your COM Port Trigger

To set up a COM port trigger, you need to connect the GPI device to a COM port on your system and then select the COM port in the TitleOne Preference dialog.

1 Connect your GPI device to the COM 1 or COM 2 port on the back of your system.

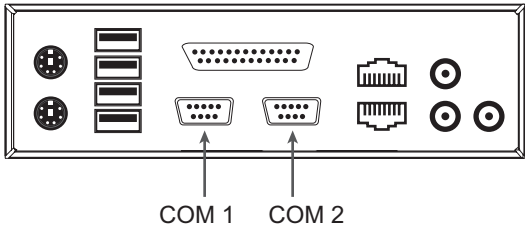


Figure 5-23. System COM Ports

The following diagram shows the pin closures for the 9-pin COM port connectors. Reverse movement is not supported.

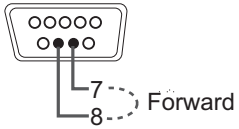


Figure 5-24. GPI Connectors

2 Once you connect your GPI device to the COM port, open the Preferences dialog in TitleOne (File > Preferences).

3 Switch to the Sequencer tab in the Preferences dialog.

4 From the GPI Port drop-down list, select the COM port that is connected to your GPI device.

5 Click OK to save the setting and close the Preferences dialog.

6 Close TitleOne and restart your system.

Select the GPI Trigger

Use the options on the group header or the Event Editor tab to select the GPI trigger.

1 Select the group header.

2 Select the trigger using one of the following methods.

- On the group header, right-click on the current trigger and select GPI from the right-click menu.
- On the Event Editor tab, select GPI from the Trigger Type drop-down list.

Output with a GPI Trigger

Once you move the playlist online, use an external GPI button press to manually trigger each event.

1 To go online, press CTRL+SHIFT+O. You are prompted to save your playlist if you have not saved yet.

Once all the events are rendered and moved online, the Run tab becomes available.

2 Select the group header containing the events you want to output.

3 Switch to the Run tab.

4 Click the Run Job button to start the output.

5 Press the external GPI button to trigger your event. The event plays on the program channel.

6 Continue to output the remaining events using one of the following methods.

- To immediately play the next event, press the external GPI button. The current event is cleared from screen and the next event plays.
- To clear the screen before playing the next event, click the CLR button above the Program palette (or press CTRL+SHIFT+ENTER). Press the external GPI button to play the next event.

Use the Time Code Trigger

The Time Code trigger uses an external time code source to trigger each event. Events are triggered once the time code source reaches the event in point.

Set Up Your Time Code Source

To set up your Time Code source, you need to connect the time code device to your system and check that the time code is enabled.

1 Connect your time code device to the LTC input on the XD-200 paddleboard located on the back of your system.

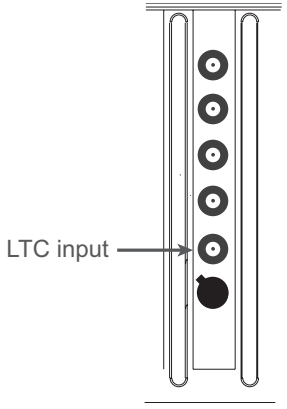


Figure 5-25. Connect Time Code Device to the LTC Input

2 Open the XD-200 Control Panel from the Windows Start menu (Start > All Programs > Harris > TitleOne > Configuration Utilities > Phoenix Control Panel).

3 In the XD-200 Control Panel, click the Input/Output button and ensure the Enable Timecode Input checkbox is selected.

Note: If you do not have a timecode signal connected to the card, make sure the checkbox is cleared.

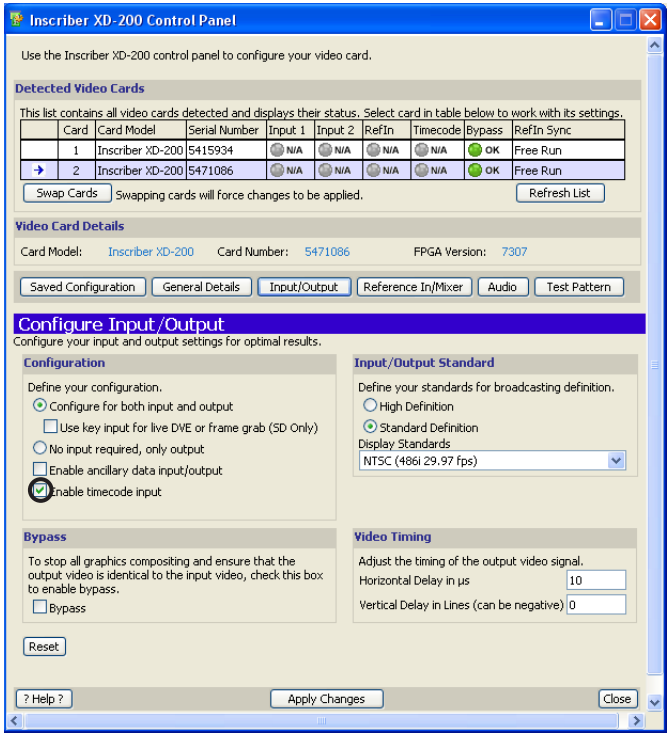


Figure 5-26. Enable Timecode Input Checkbox

4 Click Close.

Select the Time Code Trigger

Use the options on the group header or the Event Editor tab to select the Time Code trigger.

1 Select the group header.

2 Select the trigger using one of the following methods.

- On the group header, right-click on the current trigger and select TimeCode from the right-click menu.
- On the Event Editor tab, select TimeCode from the Trigger Type drop-down list.

Output with a Time Code Trigger

Once you move the playlist online, you can start playback. When the time code device reaches the event in point, the event is output to the program channel.

1 To go online, press CTRL+SHIFT+O. You are prompted to save your playlist if you have not saved yet.

Once all the events are rendered and moved online, the Run tab becomes available.

2 On the Event Editor tab, click the Start Reading arrow beside the Source field. The Source field displays the current time code.

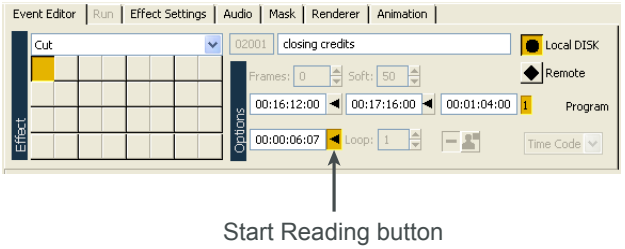


Figure 5-27. Start Reading TimeCode Source

3 Select the group header containing the events you want to output.

4 Switch to the Run tab.

5 Click the Run Job button. Events are triggered once the time code device reaches the event in point.

Offset Timecode

When you use the Time Code trigger, you can offset the timecode for your Time Code group. This feature is helpful if you see a slight delay between the system output and the timecode input.

1 Select Edit > Set Timecode Offset. The TimeCode Offset dialog opens.

2 Enter the amount of time you want to offset the events in hh:mm:ss:ff.

Entering a time value adds the time to the timecode. For example, if you enter 00:00:30:00, 30 seconds are added to the timecode.

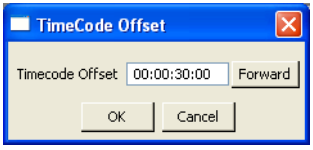


Figure 5-28. TimeCode Offset Dialog

3 To remove (decrease) the time from the timecode, enter the time in hh:mm:ss:ff and click the Forward button to read Reverse.

When Reverse displays, the time is removed from the timecode. For example, if you enter 00:00:30:00, 30 seconds are removed from the timecode.

Use the PC Clock Trigger

The PC Clock trigger uses the internal clock on your system to trigger each event. Time is measured in 24-hour format. Events are triggered once the system clock reaches the event in point.

Select the PC Clock Trigger

Use the options on the group header or the Event Editor tab to select the PC Clock trigger.

1 Select the group header.

2 Select the trigger using one of the following methods.

- On the group header, right-click on the current trigger and select PC Clock from the right-click menu.
- On the Event Editor tab, select PC Clock from the Trigger Type drop-down list.

Output with a PC Clock Trigger

Once you move the playlist online, you can start playback. When the system time reaches the event in point, the event is output to the program channel.

1 To go online, press CTRL+SHIFT+O. You are prompted to save your playlist if you have not saved yet.

   Once all the events are rendered and moved online, the Run tab becomes available.

2 On the Event Editor tab, click the Start Reading arrow beside the Source field. The Source field displays the current system time.

3 Select the group header containing the events you want to output.

4 Switch to the Run tab.

5 Click the Run Job button. Events are triggered once the system time reaches the event in point.

Prepare the Playlist for Output

Before you output your playlist you have a number of playback options available in Sequencer. The playback options allow you to set the following:

- Playlist loop options.
- Event output highlight.
- Event render location.
- Live video display (DVE).

Loop the Playlist

After you move the playlist online, you can set the playlist to loop during output. Sequencer continues to play the job until you stop the output.

For each loop, the playlist restarts at the set start time, which is determined by the selected trigger type.

1 Switch to Online mode (CTRL+SHIFT+O). The Run tab becomes available.

2 Switch to the Run tab.

3 Select the Cycle checkbox. During output the playlist will loop.

Highlight Event During Output

During output you can set Sequencer to highlight the current event in the global playlist and the Sequencer playlist.

1 Switch to the Run tab. If you need to move online, press CTRL+SHIFT+O.

2 Set your highlight option.

- To highlight the current event in the global playlist, select the Live Playlist checkbox.
- To highlight the current event in the Sequencer playlist, select the Live Update checkbox.

Select Render Location

The render location determines where your events are rendered when you go online. You have two choices: local disk or remote. You can set the render location for each event in the playlist.

1 Select the event in the playlist.

2 Switch to the Event Editor tab. If you need to move offline, press SHIFT+CTRL+O.

3 Select the Local Disk or the Remote button to set the render location for the selected event.

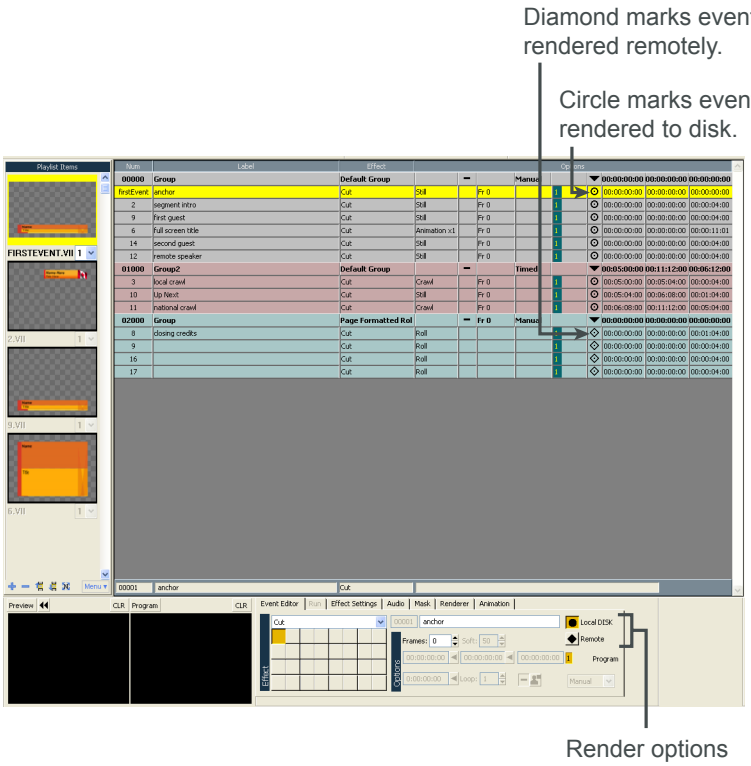


Figure 5-29. Render Options

- Local Disk: Renders the event to a file on your local hard drive. Image display latency depends on local drive access speed and image size.
- Remote: Renders the event to a remote location during output. Image display latency depends on network or CD-ROM access time and image size.

Note: Remote rendering occurs only when you setup or run the event. If images or fonts are not available at that point, the rendering process may fail or give unexpected results. The advantage of Remote rendering is that your hard drive space is not used to store the rendered events.

Assign Events to Different Channels

If you have a dual channel system, you can send your layouts to channel I or channel 2. Use the playlist, the Program palette, or the Event Editor tab to select the channel. The Program/Preview palette controls two program channels when you have a dual channel system.

On output, the event plays on the selected channel.

- Playlist: Use the Channel drop-down list to select the channel for the event.
- Program palette: Use the Channel buttons on the Program palette to assign a channel to the selected event.
- Event Editor tab: Use the Channel buttons on the Event Editor tab to assign a channel to the selected event.

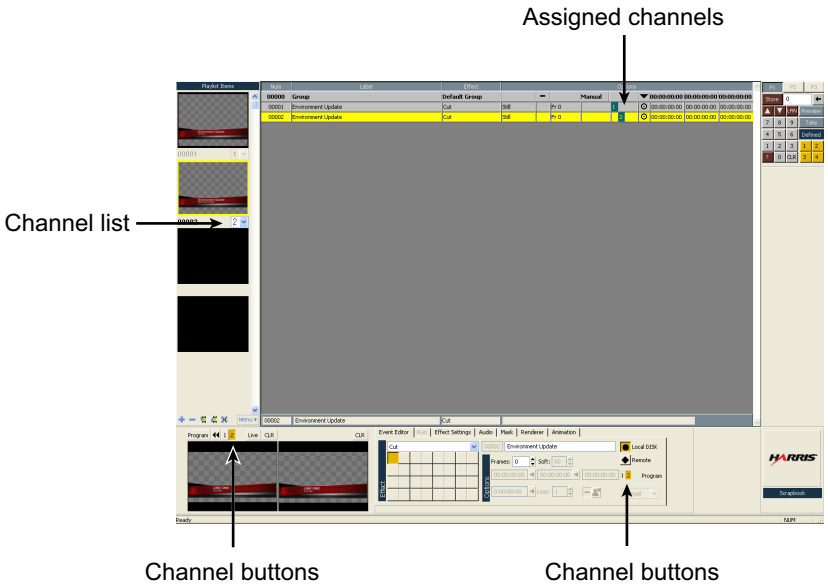


Figure 5-30. Dual Channel Options

Note: You can output two events simultaneously. See "Output Two Layouts Simultaneously" on page 48 for details.

Set Live Video Display

You can use the DVE option to size and position live video by applying single-channel digital video effects (DVEs) to your layouts. TitleOne makes a copy of the incoming video and shrinks it to the set size. On output, the DVE window creates a video region containing the live video source. The DVE plays on top of your events.

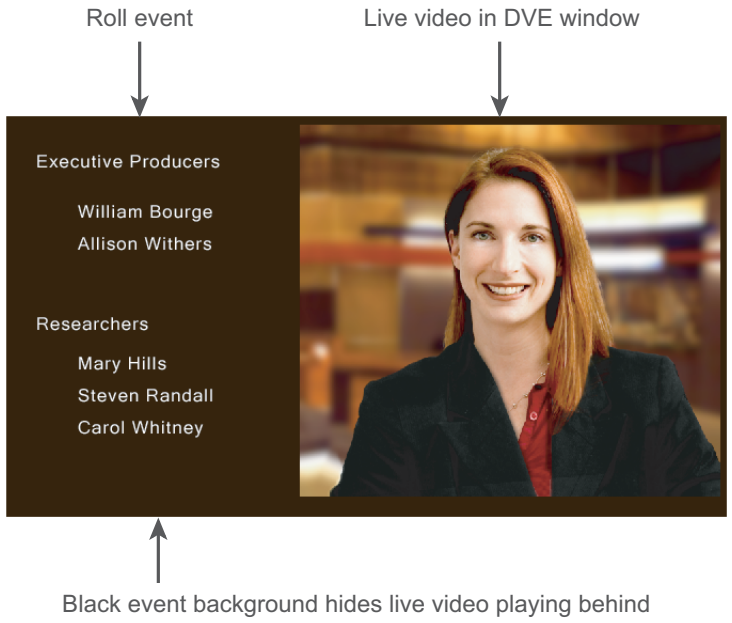


Figure 5-31. DVE Example

When you play live video in a DVE window, the live video also continues playing in the background. For example, if you have a DVE playing over a roll event, the live video also plays in the background behind the roll event and is visible if the roll event has any transparent areas. Use a full screen background in your layouts to hide the live video.

DVEs are applied to the entire group so every event in the group appears in the DVE window. You can add as many group headers to your job as needed (Playlist > Insert Group Header). When you output the group, the live video plays in the DVE window and the event plays in the background.

1 Select a group header.

2 Right-click on the Pop-Back icon (which looks like a dash or hyphen) in the group header, and then select Pop-Back from the menu.

After you click the Pop-back button, the currently selected DVE template is applied to all events in the group during output. The default template is full-screen.

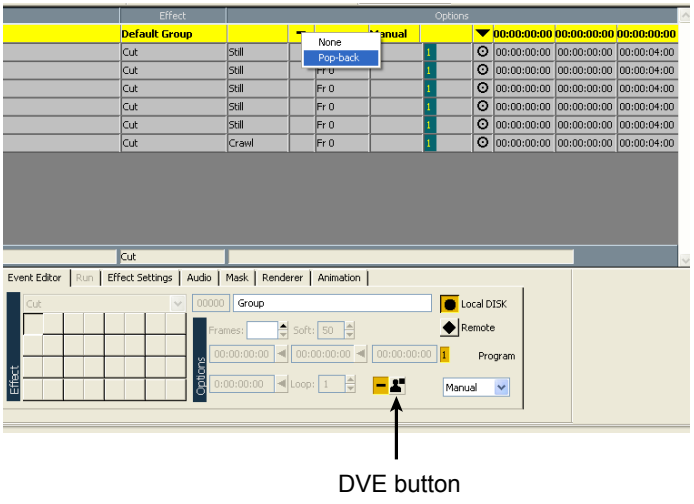


Figure 5-32: Pop-back DVE Button

3 To change the size and position of the DVE window, right-click on the Pop-Back icon in the group header and select Edit from the menu.

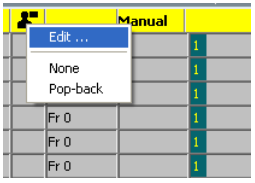


Figure 5-33. Select Edit to Access the DVE Options

4 In the Pop-back Templates dialog, do one of the following:

- Select another template that represents the size and position of the DVE you want from the list. TitleOne ships with preset templates.
- Reposition the DVE window, by dragging the DVE window in the preview panel of the dialog box.

5 Resize the DVE window, by holding down BOTH the right and the left mouse buttons, and then dragging the window.

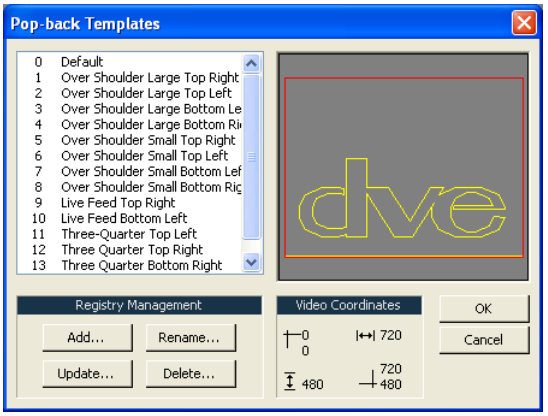


Figure 5-34: DVE Window

6 Save the template position and size.

- To save your changes in the same template, click the Update button.
- To save your changes as a new template, click on the Add button. In the Add Item dialog, enter a name and number for the DVE template.

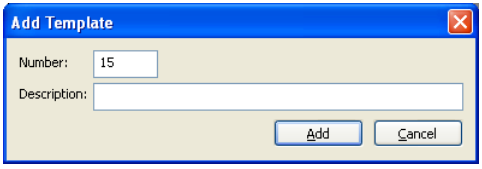


Figure 5-35: Add New DVE Templates

Output in Sequencer

TitleOne includes a number of global output options that are available in every TitleOne tool. For details on the global output options, see "Global Output" on page 46. The information in this section describes the output options available in Sequencer.

Move Online

The Run tab includes the output options for Sequencer, and is only available after you move the playlist online. When you switch to Online mode, Sequencer renders your events and prepares them for output. After all the events are rendered, the Run tab becomes available.

Move Online

To move online:

- Click the Offline/Online toggle button on the toolbar.
- When you click the Offline button TitleOne moves the current playlist online, and the button changes to read Online. You can click the Online/Offline button again to move offline.

Figure 5-36. Offline/Online Toggle Button

- Press CTRL+SHIFT+O.

Move Offline

To move offline:

- Click the Offline/Online toggle button on the toolbar.

  When you click the Online button TitleOne moves the current playlist offline, and the button changes to read Offline. You can click the Online/Offline button again to move online.

Figure 5-37. Offline/Online Toggle Button

- Press CTRL+SHIFT+O.

Online Folders

When you move online TitleOne renders your events first and then displays the rendered file on output. The rendered files are saved in a folder that uses the name of your playlist.

For example, if your playlist is called MorningShow.scribelist the online folder is called morningShow.OnlineFiles.

The online folder is placed in the same location as your .scribelist file. You can use the Preferences dialog to change the default location for your online files.

1 Select File > Preferences.

2 In the Preferences dialog, switch to the Sequencer tab.

3 Click the Browse button below the On-Line Output Directory field.

4 In the Select On-Line Output Directory dialog, select the new folder for your online files and click OK. The new folder displays.

5 Click OK in the Preferences dialog to apply the change.

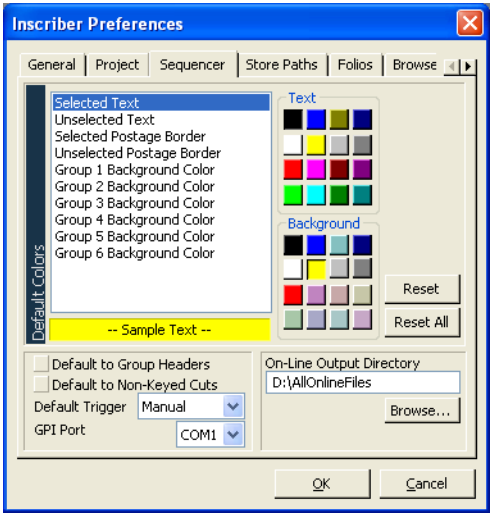


Figure 5-38. Change the On-Line Output Directory

Select Events

After you move online you can access the options on the Run tab. The Number and Label option allow you to quickly select events in the Sequencer playlist.

Note: You must be online (CTRL+SHIFT+O) to access the Run tab.

Select Events by Number

After you enter the event number, the event is selected in the global playlist and the Sequencer playlist.

1 Switch to the Run tab.

2 Click the Number button.

3 Enter the event number.

4 Press ENTER. Sequencer selects the event.

Select Events by Label

After you enter the event name, the event is selected in the global playlist and the Sequencer playlist.

1 Switch to the Run tab.

2 Click the Label button.

3 Enter the event name.

4 Press ENTER. Sequencer selects the event.

Preview an Event

You can use the Preview button on the Run tab to preview the selected event.

1 Select the event you want to preview.

2 Switch to the Run tab. If you need to, press CTRL+SHIFT+O to move online.

3 Click the Preview button. The event preview displays in the Preview palette and on your preview monitor.

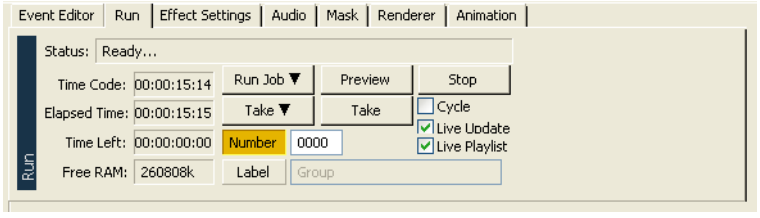


Figure 5-39. Preview Button on Run Tab

Take a Single Event

Use the Take buttons on the Run tab to take a single event.

1 Select the event you want to take.

2 Switch to the Run tab. If you need to, press CTRL+SHIFT+O to move online.

3 Use one of the Take options to take your event.

- Click on the Take Down button (Take ▼) on the Run tab to take the current event and load the next event to the preview channel.
- Select the event in the Sequencer playlist and press the PLUS (+) key on the number pad. Pressing the PLUS (+) key outputs the layout and loads the next event in the playlist to the preview channel.

  If you select a new event in the sequence and press the PLUS (+) key, the previously setup event will take to air. Set up the selected event by pressing the number pad MINUS (-) key. Then press the number pad PLUS (+) key to output the event.
- Click on the Take button (Take) on the Run tab to take the current event without loading the next event to the Preview Channel. You can also use the ENTER key on the number pad for the same effect.

Run the Job

Use the Run Job button on the Run tab to run the playlist from the selected event.

1 Select the event where you want to start playback.

2 Switch to the Run tab. If you need to, press CTRL+SHIFT+O to move online.

3 Click the Run Job button.

- If you are using the Manual or GPI trigger, press the SPACEBAR or GPI button to trigger the events.
- If you are using the Timed, PC Clock, or Time Code trigger the events play based on their in points.

Stop Playback

Use the Stop button on the Run tab to stop output after the current event completes playback.

1 Switch to the Run tab.

2 Click the Stop button. Output stops after the current event completes playback.

Note: To stop playback immediately, press the Pause key. The current event freezes on-screen. You can click the CLR button above the Program

palette to clear the screen.

Clear the Output

You can clear the content of program channel or the preview channel using the Program/Preview palette.

- To clear the contents of the Preview palette, click the CLR button above the Preview palette.
- To clear the contents of the Program palette, click the CLR button above the Program palette.

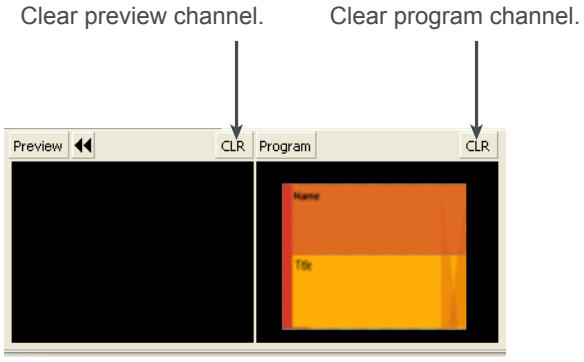


Figure 5-40. Clear Channel Options

Note: You can clear the contents of the program and preview channels from any TitleOne tool. This option is not specific to Sequencer.

Output Rolls and Crawls

Sequencer includes options for changing the output speed of rolls and crawls, and for playing your page-formatted (multi-page) rolls and crawls.

Change Roll/Crawl Output Speed

You can change the speed of a roll or a crawl during output.

- To increase the roll/crawl speed, press ALT+SHIFT+Page Up.
- To decrease the roll/crawl speed, press ALT+SHIFT+Page Down.

Pause Roll/Crawl Playback

You can pause the playback of rolls and crawls using the PAUSE key.

1 During the roll/crawl output, press the PAUSE key to pause the output.

2 Press the PAUSE key again to resume output.

Note: You can pause the playback of rolls/crawls from any TitleOne tool. This option is not specific to Sequencer.

Pause Multi-Page Rolls/Crawls

Use the Pause Page option to pause the playback of a multi-page roll or crawl (also called a page-formatted roll/crawl).

The multi-page roll/crawl displays as a separate group in the Sequencer playlist, and each page of the roll/crawl displays as a single event.

1 Select the page in the Sequencer playlist. Each page appears as a single event in the group.

2 Switch to the Effect Settings tab and check the Pause Page checkbox. The output will pause on the selected page.

3 During output, to end the pause and restart playback, use the trigger assigned to the page-formatted group header.

Monitor Output Activity

When your playlist is online and you have started playback, you can switch to the Run tab to monitor your output activity.

The Run tab displays the current time code, the amount of time elapsed for the running playlist, the amount of the time left to complete playback, and the amount of free RAM currently available.

Chapter 6

Frame Grab

Capture frames from a video signal in Frame Grab.

Introduction

Frame Grab allows you to capture a single frame from an incoming video signal and save it as a still image. Frame Grab includes special tools to crop ragged edges from the grab, filters to apply to the grab, and a variety of methods to save the image as a graphics file. Frame Grab is not available on all supported frame buffers.

Switch to Frame Grab

To switch to Frame Grab from other TitleOne modules, use one of the following methods.

- On the toolbar, click the Frame Grab button.
- Select Tools > Frame Grab.
- Press F7.

Attributes

Frame Grab is a simple module. All the Frame Grab tools and options are located in the Attributes palette at the bottom of the window and on the Frame Grab Edit menu.

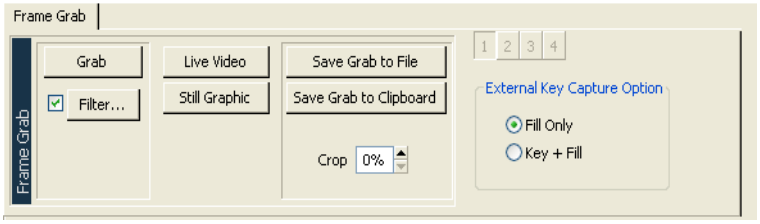
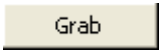


Figure 6-1. Frame Grab Attributes Palette

Grab an Image

The video plays in the Frame Grab window. To capture an image:

1 Click the Grab button.



The captured image is displayed in the Frame Grab window.

Note: The video stops playing on your video monitor after you perform a grab. See "Switch from Still to Live Video" on page 363.

Switch from Still to Live Video

After you grab an image, the video stops playing on your video monitor. Frame Grab displays the captured image.

You can change the display on your TV monitor between live video and the last grabbed frame.

- To receive live video, click the Live Video button.
- To display the last grabbed frame, click the Still Graphic button.

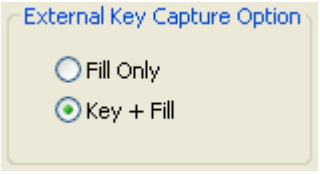
You may need to do this to compare your grab to the input signal when you are trying to decide whether the grab is okay or whether you need to change the filter options.

Key Information

When you capture frames, you can exclude the key (transparency) information.

To capture only fill information:

- In the External Key Capture Option area of the Attributes palette, select the Fill Only option.



To capture key and fill information:

- In the External Key Capture Option area of the Attributes palette, select the Key + Fill option.

Filters

A frame is composed of two interlaced fields, separated by 1/50th or 1/60th of a second. Essentially, the input signal contains the even-numbered scan lines followed by the odd-numbered scan lines. If any object in the image moves during that fraction of a second, you see flicker in the display of a frame grab using both frames.

Frame Grab allows you to use various filters to correct for flicker. There are also other filters that let you modify the image. You can switch back and forth between the filter displays until you save the image. For details, see "Use the Image Filters" on page 365.

Grab a Series of Images

To quickly grab multiple frames:

- In Frame Grab, use the CTRL+G shortcut key to grab video frames.

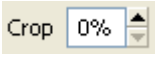
  Note: Pressing CTRL+G does not update the Frame Grab window.

For more information, see "Save a Grab Directly to Disk" on page 371.

Crop an Image

Some frame buffers leave a ragged edge on the top and bottom of each image. It may look like the grab starts half way across a scan line. Normally, this rough area is well outside the safe title area, but you can use the cropping features to remove part of the image.

Frame Grab always centers crops. To crop an image:

- Adjust the value in the Crop field. 

A white border in the Grab window marks the crop boundary. When you save the image, Frame Grab saves only the image information inside the marker. Cropping the image decreases the size of your image file.

Because you are cropping 4:3 or 16:9 images, depending on your video input, you can smoothly scale the images up to full screen again. You may notice that the image quality is degraded if you enlarge the cropped image too much.

Table 6-1. Image Cropping Advantages and Disadvantages

Cropping Advantages	Cropping Disadvantages
Eliminates the ragged edges on some frame grabs.	Scaling images back to full size may visually degrade image quality.
Only saves the relevant area of the image. Produces smaller images by eliminating unneeded image areas.	Cropped areas are permanently lost.

Use the Image Filters

Video signals contain two interlaced fields slightly offset in time. This offset causes grabbed frames to flicker. Decoded NTSC and PAL signals may have a certain amount of degradation or color distortions. You can apply filter options to minimize flicker and clean up any distortion.

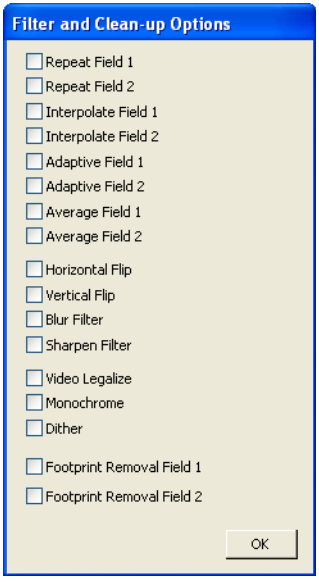
Apply Filters to Frame Grabs

You can apply filters to the current grab and to new images.

To select and apply filters:

1 Click the Filter button to open the Filter and Clean-up Options dialog.

2 Select the filters to apply to your grab by selecting the appropriate checkboxes, and then clicking OK. For a complete description of each filter, see "Image Filters" on page 365.



3 Select the Filter checkbox to apply the selected filters. The selected filters are applied to the grab as soon as you select the Filter checkbox.

Note: When the Filter checkbox is selected the filters are automatically applied to new frame grabs.

Experiment with the filters to see the kind of effects you can achieve with them. The Flip and Monochrome filters usually provide the most noticeable effects.

Image Filters

The following filter effects are available in Frame Grab.

Repeat Field 1

Duplicates the odd-numbered scan lines, replacing the even-numbered ones. The image appears to shift down.

Repeat Field 2

Duplicates the even-numbered scan lines, replacing the odd-numbered ones. The image appears to shift up.

The Repeat Field filters successfully remove field flicker without blurring the image. However, because they completely remove one of the fields, they tend to add visual steps in the image.

Interpolate Field 1

Computes new data for even-numbered scan lines from the scan lines directly above and below. The odd-numbered scan lines remain unchanged.

Interpolate Field 2

Computes new data for odd-numbered scan lines from the scan lines directly above and below. The even-numbered scan lines remain unchanged.

The Interpolate Field filters remove inter-field jitter but increase vertical image softness. These filters generally do not increase visual steps in the image.

Adaptive Field 1

Modifies the luminance values for each pixel on even-numbered scan lines based on the luminance values for the pixels directly above and below. The odd-numbered scan lines remain unchanged.

Adaptive Field 2

Modifies the luminance values for each pixel on odd-numbered scan lines based on the luminance values for the pixels directly above and below. The even-numbered scan lines remain unchanged.

The Adaptive Field filters remove inter-field jitter without increasing vertical image softness. These filters generally do not increase visual steps in the image. The Adaptive Field filters are recommended for general frame grab clean-up.

Average Field 1

Computes new data for even-numbered scan lines by averaging each one with the line directly above.

Average Field 2

Computes new data for odd-numbered scan lines by averaging each one with the line directly above.

The Average Field filters average the two fields to remove flicker. In averaging the fields these filters tend to blur motion and slightly soften the image vertically.

Horizontal Flip

Flips the image left to right.

Vertical Flip

Flips the image top to bottom.

Blur Filter

Mildly blurs the image with a 3x3 convolution filter.

Sharpen Filter

Mildly sharpens the image with a 3x3 convolution filter.

Video Legalize

Checks the image for color values that will result in out-of-range values after an encoding process. Illegal colors are corrected to legal colors with an algorithm that attempts to maintain luminance values.

Monochrome

Performs a luminance conversion, converting images to 8-bit grayscale.

Dither

Removes contouring in imported graphics with a generalized noise filter.

Footprint Removal Field 1

Applies the average field filter to the field I, followed by an adaptive field filter to field 2.

Footprint Removal Field 2

Applies the average field filter to the field 2, followed by an adaptive field filter to field I.

Set Up Frame Grab and Save Files

Set Up

As long as your frame buffer is configured correctly, TitleOne automatically does all the setup required for a frame grab as soon as you switch to the Frame Grab module. All you have to do is start the input feed. Frame Grab requires an encoder on the frame buffer board. It does not work on the VMAXX-I0 board. On other systems, frame grabs are saved as I6- or 32-bit image files, but transparency is lost.

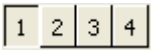
When you switch to Frame Grab, TitleOne sets your frame buffer to video passthrough so that you can see the incoming signal on your video monitor. If you have trouble, check the following items.

Table 6-2. Set Up Troubleshooting

Problem	Possible Solutions
No Input Signal	Check the cable connections and the setup options in your frame buffer configuration software. Some frame buffers fail to switch to video passthrough if you select the wrong input type in the configuration software.
Scrambled Signal	Check that the horizontal and vertical frame buffer resolutions match the input signal resolution. Check these values on the General Preferences tab.
No Sync	Check your sync input source and the sync options in the frame buffer configuration software.

Multiple Board Systems

When you have more than one frame buffer installed, you can perform a grab from any frame buffer board. To select a board:

- Use the Program palette. For information on the Program/Preview palette, see "How Do I Use the Program/Preview Palette?" on page I3.
- Click a channel button in the Attributes palette. 

To limit grab capability to one board only, edit Inscribe.ini and change the

FrameGrabOnBoards entry in the [Configuration] section. By default, this entry is set to 0, which enables frame grabs from any board. To limit grabs to one particular board, change this value to 1, 2, or 3 to match the board to grab from. For example, to limit grabs to board 2, set FrameGrabOn Boards to 2:

```
[Configuration]
FrameGrabOnBoards=2
```

Initialize Board

By default, Frame Grab does not initialize the current board to Live when you switch to the Frame Grab module. This means that the output on the channel is not disrupted until you click the Live button.

For convenience, you can set up your system to automatically initialize the board to Live when you switch to Frame Grab. Change the FrameGrabInitLive value in Inscribe.ini to 1 instead of the default value of 0.

```
[Configuration]
FrameGrabInitLive=1
```

Save an Image

Once you have grabbed an image in Frame Grab, there are four ways to save it.

- Save a grabbed image to a file.
- Grab an image and directly save it to disk.
- Copy the grabbed image to the Clipboard for use with other applications.
- Add the grabbed image to the Scrapbook.

Save a Grab to a File

You can save a frame grab as a graphics file that you can use in Inscriber programs or graphics applications.

1 Click the Save Grab to File button.

2 Navigate to the drive and folder in which to save the file.

3 Select a file type for the image file.

You can save the image as a 24-bit .bmp file (the key information is lost) or a 32-bit .vii or .tga file.

Most graphics applications can read .tga and .bmp image files. Other Inscriber programs can read .vii files.

4 Enter a filename, and click OK.

Save a Grab Directly to Disk

You can capture a frame and directly save it to disk.

1 To capture a frame, press CTRL+G (instead of pressing the Grab button).

The image is saved in the directory specified by the FrameGrabDirectory entry in the [Preferences] section of the Inscribe.ini file.

Note: Pressing CTRL+G does not update the Frame Grab window.

Note: Depending on your hardware, you can grab a maximum of one frame per second.

Save a Grab to the Clipboard

You can paste a grabbed image directly into another Windows application.

1 Click the Save Grab to Clipboard button.

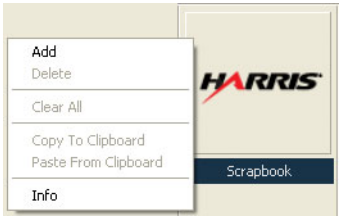
2 Switch to the other application.

3 To insert the image, select Edit > Paste.

Add a Grab to the Scrapbook

You can add a frame grab to the TitleOne Scrapbook to quickly use it in other modules.

1 Right-click the Scrapbook and then select Add.



To use the grab in another module:

1 Switch to the module.

2 In the Scrapbook, right-click the image and then select Use.

For example, in Sequencer, the grab is added to the Event list and an image thumbnail appears in the playlist. You can set transition and duration information for the image.

Note: The Scrapbook is a temporary file that is deleted when you close TitleOne. To keep any images permanently, ensure that you save them.

For more information on the Scrapbook, see "How Do I Use the Scrapbook?" on page 15.

Chapter 7

Media Store

A searchable list of media files in Media Store.

Introduction to Media Store

Media Store provides a searchable list of stills, video clips, and animations. Media files display as thumbnails with text descriptions in the Media window.

Using Media Store, you can quickly find and use media files. You can browse for media files or create Media Store databases of media files, which can be organized into folios containing related files. Searches are based on date, keywords, title, media file number, or other attributes. You can take a media file to video in real-time or add files to the playlist.

Feature Note Media Store is a purchase option in TitleOne.

Switch to Media Store

You can easily switch between modules using the buttons on the toolbar or the options from the Tools menu.

To switch to Media Store, use one of the following methods.

- On the toolbar, click the Media Store button.
- Select Tools > Media Store.
- Press F9.

Interface Overview

The Media Store interface has the following components.

- Media window
- Navigation pane
- Media Store toolbar
- Attributes palette
- Shot Box palette
- Media Store palette
- Playlist
- Scrapbook

- Program/Preview palette

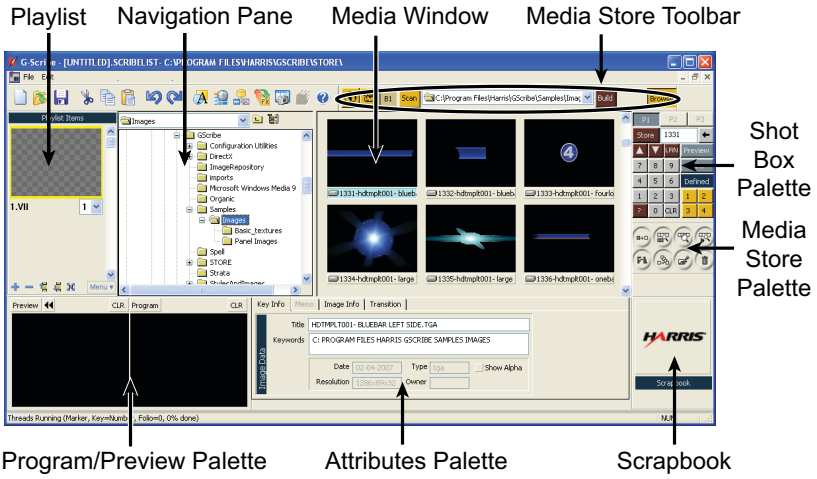


Figure 7-1. Media Store Interface

There are two modes in Media Store, browse mode and database mode, which control the media displayed in the Media window and the buttons on the Media Store toolbar.

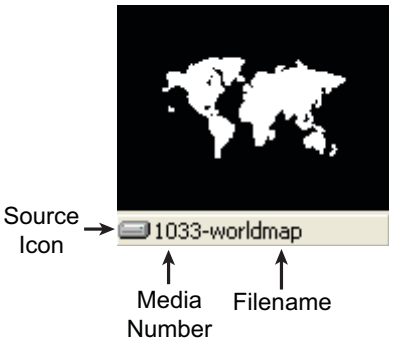
Media Window

The Media window displays thumbnail previews for the media files in the current folio. For information on folios, see "Media Store Toolbar and Modes" on page 378. Non-graphic files, such as text and executable files, do not display. For video clips and animations, the thumbnail displays the first frame.

Note: To refresh the Media window when viewing a network path that does not update automatically, press F5.

Media Store lists descriptive information for each file below its thumbnail.

- Source icon
- Media number (assigned by Media Store)
- Filename without extension (by default)



You can display the file's title or first keyword instead of the filename. For more information, see "Change the Thumbnail Text" on page 430.

Table 7-1. Media File Source Icons

Source Icon	File Type and Source
	Image or layout on local drive
	Image or layout on network drive
	Image or layout on removable drive
	Image included in database
	Video or animation on local drive
	Video or animation on network drive
	Video or animation on removable drive

To display a larger preview of a media file, hover the mouse pointer over the thumbnail label.

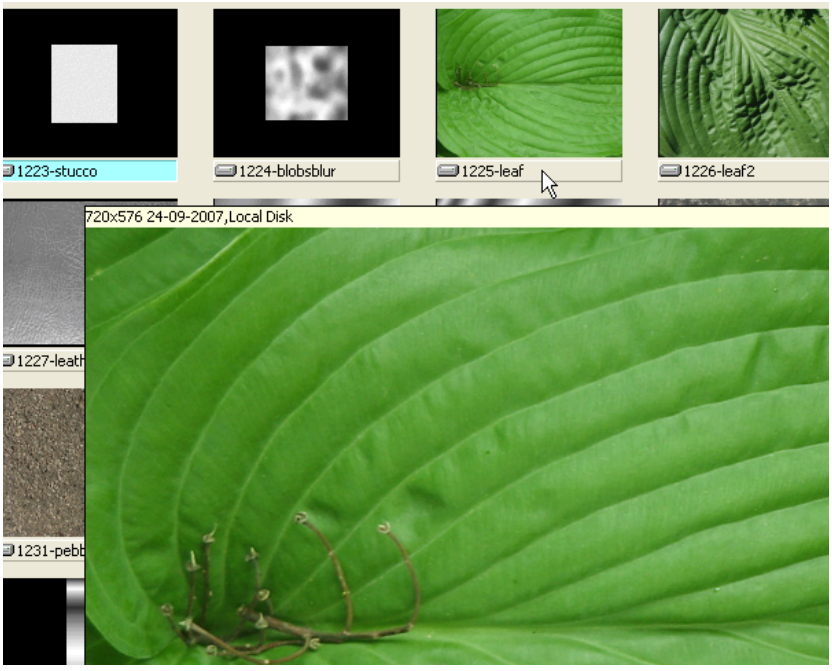


Figure 7-2. Large Preview of a Media File

To disable the display of large previews:

1 Select Media Store > Hold-Over Display.

Editable template thumbnails display a T icon in the top right corner. The T indicates that the file is a template layout.

Figure 7-3. T Icon - Template Layout

For information on changing the thumbnail display in the Media window, see "Update Thumbnails" on page 406.

Navigation Pane

In the navigation pane, you can browse local, removable, and network drives for media files. When you select a folder in the navigation pane, Media Store switches to browse mode and the Media window displays thumbnail previews of the media files in the folder.

Media Store Toolbar and Modes

Using the Media Store toolbar, you can control the Media Store mode (browse or database) and select the "folio" (a group of related media files) displayed in the Media window.

In each mode, the Media Store toolbar provides access to distinct folios. For example, in database mode there is a folio of all the media files in the current Media Store database (Global folio) and there are collection folios to which you can assign database files, such as files that have the same source or subject. To display the media files of a folio in the Media window, click the corresponding button on the Media Store toolbar.

The Browse button on the toolbar allows you to switch between browse mode and database mode. If the Browse button is selected, the browse mode toolbar displays and the Media window displays browsed media files.

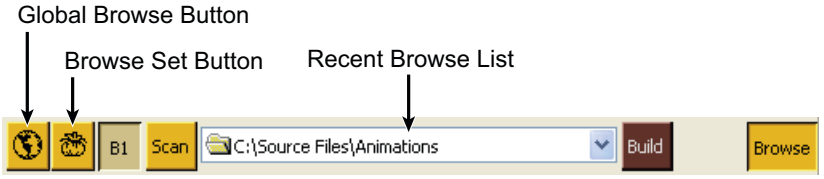


Figure 7-4. Browse Mode Toolbar

Note: If you use the navigation pane to browse the files in a folder, Media Store switches to browse mode. For more information, see "Browse Media Files" on page 385.

Use the toolbar to select the media files displayed in the Media window.

Table 7-2. Browse Mode Toolbar

Button/List	Function
Global Browse button (See Figure 7-4 on page 378.)	Displays all the media you have browsed using the navigation pane.
Browse Set button (See Figure 7-4 on page 378.)	Displays search results from last browse mode search. For more information, see "Search for Media" on page 413.
BI button	Displays the contents of the folder selected in the navigation pane (Browse folio). After you have browsed several folders, click the Global Browse button to display all the media files in the folders browsed.
Scan button	Sets up folders to monitor for updates. For more information, see "Scan Files for Updates" on page 406.
Recent Browse list (See Figure 7-4 on page 378.)	Displays a list of the last ten folders browsed.
Build button	Displays media in the Build set, files to be added to the Media Store database in the next build. For more information, see "Create a Database" on page 388. Clicking this button switches Media Store to database mode.
Browse button	Stops browsing files on drives and switches to database mode, so that you can view files in a Media Store database.

To switch to database mode, click the Browse button on the Media Store toolbar (so that it is not selected). The database mode toolbar displays and

the Media window displays the media files in the current Media Store database.

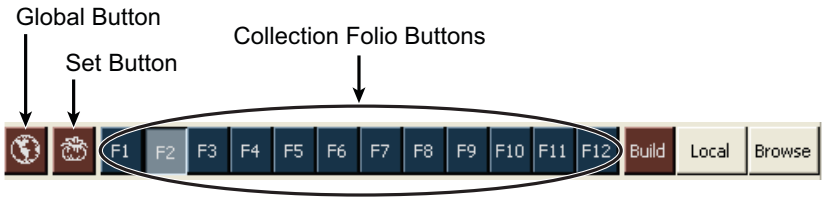


Figure 7-5. Database Mode Toolbar

The Media Store module opens in database mode. For more information on databases, see "Media Store Databases" on page 388.

Use the toolbar to select the media displayed in the Media window.

Table 7-3. Database Mode Toolbar

Button	Function
Global (See Figure 7-5 on page 380.)	Displays the media files in the current Media Store database.
Set (See Figure 7-5 on page 380.)	Displays search results from your last database search. For more information, see "Search for Media" on page 413.
F1-F12	Collection folios that you can use to organize files. To add media to these folios, drag thumbnails from the media window to a collection folio button. For more information, see "Collection Folios" on page 402.
Build	Displays media in the Build set, files to be added to the Media Store database in the next build. For more information, see "Create a Database" on page 388.

Table 7-3. Database Mode Toolbar

Button	Function
Local/System	Switches the collection folio buttons (F1-F12) between the Local collection folios and the System collection folios. For more information, see "Collection Folios" on page 402.
Browse	Stops viewing database files and switches to browse mode, so that you can browse files on drives. You can also click a folder in the navigation pane to switch to browse mode and browse the files in that folder.

Note: The Global and Set folios available from the database mode toolbar are different from the Global Browse and Browse Set folios available from the browse mode toolbar.

Attributes Palette

The Attributes palette contains tabs that display descriptive information for a media file, such as title, keywords, date, file type, and database storage information.

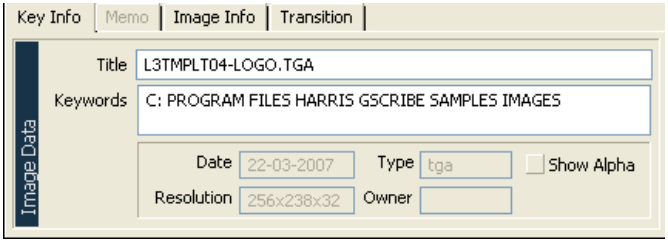


Figure 7-6. Attributes Palette

For database media files, the Attributes palette contains the Memo tab on which you can enter notes for the file. For database image files, the Image Info tab shows whether the file has been added to the database (instead of referenced) and, if so, any compression algorithm applied to the image.

For information on updating media file titles, keywords, and memos, see

"Update Thumbnails" on page 406.

Media Store Palette

The Media Store palette provides quick access to functions.

Figure 7-7. Media Store Palette

Table 7-4. Media Store Palette Buttons

Button	Function
	Saves the updated information for a media file.
	Searches for media files. For more information, see "Search for Media" on page 413.
	Finds a media file. For more information, see "Find a File" on page 416.
	Finds the next media file matching the find criteria. For more information, see "Find a File" on page 416.
	Sorts the thumbnails in the Media window. For more information, see "Sort Media Files" on page 407.

Table 7-4. Media Store Palette Buttons

Button	Function
	Adds media files in the Build set to a Media Store database. For more information, see "Create a Database" on page 388.
	Edits the current folio name.
	Deletes files selected in the Media window. For more information, see "Delete Media Files" on page 411.

Shot Box Palette

The Shot Box palette provides a quick keyboard method for finding and outputting files in the Media window or playlist. The Store/Play button switches between selecting files from the Media window and selecting files from the playlist. To access a media file, enter its media number in the

Number field.

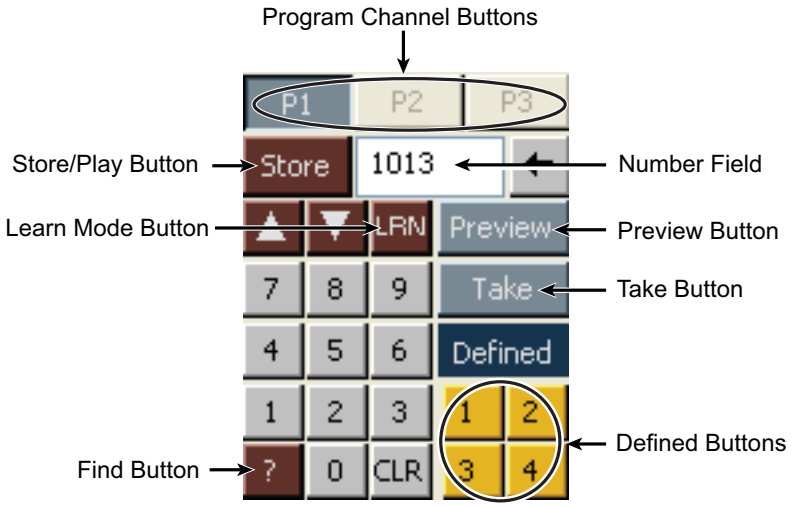


Figure 7-8. Shot Box Palette

You can perform the following tasks using the Shot Box.

- Find and then select or preview a media file. For more information, see "Find a File Using the Shot Box Palette" on page 417.
- Add media files to the playlist. For more information, see "Add Media Files to the Playlist Using the Shot Box Palette" on page 426.
- Define media files that you can take to video with a single-click. For more information, see "Set Up Media Files for Single-Click Takes" on page 428.
- Take media files to video. For more information, see "Take Media Files Using the Shot Box Palette" on page 428.

Playlist

The playlist contains thumbnails of all the events in the current playlist. Using the playlist, you can quickly add, move, copy, or replace events. Every module contains the playlist. For more information, see "Create a Playlist" on page 312 and "Edit Playlist Options" on page 313.

In Media Store, you can quickly add media files to layouts and then take

them to video. See "Add Media Files to the Playlist" on page 425.

Scrapbook

The Scrapbook can temporarily store layouts, images, logos, and other media items for transfer between modules. When you exit TitleOne, the Scrapbook is emptied. For more information, see "How Do I Use the Scrapbook?" on page 15.

Program/Preview Palette

The Program/Preview palette allows you to view the contents of the Program Channels and Preview Channel. For more information, see "How Do I Use the Program/Preview Palette?" on page 13.

Browse Media Files

To browse folders on local, removable, or network drives, use the navigation pane to the left of the Media window.

1 In the navigation pane, navigate to the folder to browse.

2 To view thumbnails of the files in the folder, select the folder. Media Store displays only the files of the selected folder in the Media window.

When you display the contents of a folder in the navigation pane, Media Store switches to browse mode.

Figure 7-9. Use Navigation Pane to Browse Folders

The buttons on the Media Store toolbar control the folder or folio displayed

in the Media window.

Table 7-5. Browse Folders and Folios

Button/List	Function
Global Browse button	Displays all the media you have browsed using the navigation pane.
Browse Set button	Displays search results from last browse mode search.
BI button	Displays the contents of the folder selected in the navigation pane. After you have browsed several folders, click the Global Browse button to display all the media files in the folders browsed.
Recent Browse list	Displays a list of the last ten folders browsed.

For more information on browse mode, see "Media Store Toolbar and Modes" on page 378.

Export Media Store Media Files

You can export media files displayed in the Media window.

1 Select a media file in the Media window. Use the CTRL and SHIFT keys to select multiple thumbnails.

2 Select File > Export > Export Selected Store Images.

3 In the dialog, select a file type and location and then click OK. Media Store names the files numerically. If you save multiple files, the files are saved sequentially by number.

Metadata

Metadata is data used to describe a media file, including transition information and keywords. Because all users in a multi-user environment share the same metadata, the attribute settings for each media file are synchronized without using a central database. For example, if you update the keyword list for a media file, all other users see the change. Using metadata, you can also easily recover the Attributes palette settings (see "Attributes Palette" on page 381) for all the media files you browse or add to a Media Store database.

If you edit the attributes of a media file in browse mode, Media Store creates a metadata file for the media file. Also, Media Store creates a metadata file for every media file you add to a database using the following methods.

- Browsed media files
- Frame grabs captured by pressing CTRL+G

The metadata file contains all the media file information from the Media Store Attributes palette, including the following.

- Title
- Keywords
- Key information, such as file type and size
- Memo (database media files only)
- Transition information: type, direction, and duration
- Default output channel
- Video clip information: mark in and mark out points, duration, and loop setting

The metadata for browse mode is distinct from the metadata for database mode, so you can set different attribute values for a media file in the two modes.

The metadata file is created in the same directory as the corresponding media file. The metadata filename is the same as that of the media file, with an .xm_scribe file extension. For example, if you browse or add to a database the file image1.bmp, Media Store creates a metadata file named image1.bmp.xm_scribe.

The metadata file is updated if you edit the attributes of a media file (in browse mode or database mode), so the metadata is always up to date. To create a metadata file for a media file in an existing Media Store database, edit the file attributes, for example, append a new keyword to the keyword list.

You can easily recover a lost or corrupt database by recreating the database and adding your media files. Media Store uses the metadata files to recover the Attributes palette settings for all your files. For more information, see "Fix Database Issues" on page 404.

Media Store Databases

A Media Store database is a searchable collection of media files stored on a local or network drive. You can build and use many databases, switching between them as needed. Creating a database of your media files makes searching fast and easy.

This section describes how to set up Media Store databases and view database files.

- Add media files to the Build set, and then build the files into a database as a batch process. For more information, see "Create a Database" on page 388.
- View database media files in the Media window. For more information, see "View Database Files" on page 401.
- Organize database files in folios. For more information, see "Collection Folios" on page 402.
- Switch between databases. For more information, see "Switch Current Database" on page 403.

Feature Note Media Store is a purchase option in TitleOne.

Create a Database

To create a database, complete the following steps.

1 Create a database location.

2 Add the files to build into the database to the Build set. You can view the files in the Build set by clicking the Build button on the Media Store toolbar.

3 For each file, you must set a title and at least one keyword. You can verify the spelling accuracy using the Spell Checker and search for synonyms or antonyms using the Thesaurus.

4 For each file, set the media options: image sizing and compression.

5 Build the database. You can add only selected files or all the files in the Build set.

To add media files to an existing database, switch to the database (see "Switch Current Database" on page 403), and then add the files to the Build set and build the files into the database (steps 2-5).

Create a Database Location

The default Media Store database location is in your product installation folder. It is recommended that you store all databases on a network drive.

The first step in creating a database is to set the locations for the database, the user folios, and the browsed files.

1 Select File > Preferences. The Preferences dialog opens.

2 In the Preferences dialog, switch to the Store Paths tab. You enter the information for the new database in the Store Locations area at the bottom of the tab.

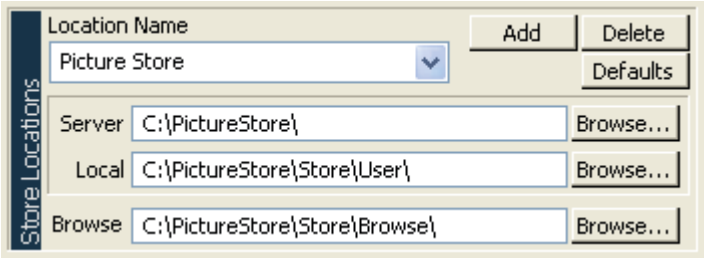


Figure 7-10. Store Paths Tab - Store Locator Area

3 In the Location Name field, enter a name for the new database.

4 In the Server field, enter the network path for the database, or click the Browse button and navigate to the network path.

5 In the Local field, enter the local path for the user folios, or click the Browse button and navigate to the local path.

6 In the Browse field, enter the network path for the browsed files, or click the Browse button and navigate to the network path.

7 Click the Add button.

8 To close the Preferences dialog, click OK. The new database is now the active database.

For information on switching between databases, see "Switch Current Database" on page 403.

Add Browsed Files

You can browse for files to add to the Build set using the navigation pane or the Build Media Store dialog. For information on browsing folders, see "Browse Media Files" on page 385.

Use the navigation pane to browse files.

1 In the navigation pane to the left of the Media window, navigate to and select each folder that contains files to add.

2 On the Media Store toolbar, click the Global Browse button. The Media window displays thumbnails of the media files in all the folders you browsed.

3 In the Media window, select the files to add and drag them to the Build button on the Media Store toolbar.

Note: You can drag files from the Media window to the Build button immediately after selecting the folder that contains them.

You can also add files to the Build set using the Build Media Store dialog.

1 To open the Build Media Store dialog, click the Add to the Store button on the Media Store palette.

Figure 7-11. Media Store Palette - Add to the Store Button

The Build Media Store dialog lists all the files in the Build set.

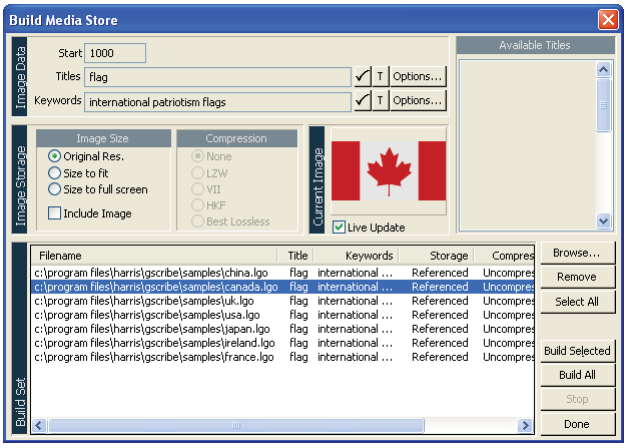


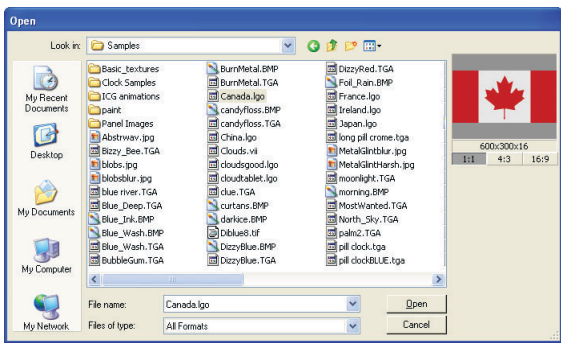
Figure 7-12. Build Media Store Dialog

2 To add files to the Build set, click the Browse button.

3 In the Open dialog, navigate to the files to add.

4 Select the files. You can preview a file in the preview region in the top right corner of the dialog.

5 To add the files, click the Open button.



Add Frame Grabs

You can add frame grabs to the Build set as images.

1 If you need to adjust any frame grab options, such as filters, switch to the Frame Grab module and update the options. You can grab frames in either the Frame Grab module or the Media Store module.

2 To grab a frame, press CTRL+G. The image is added to the Build set.

Add Files from Other Modules

You can add media files from other modules to the Build set.

1 Grab an image in Frame Grab, create a layout in CG, or create a logo in Paint.

2 Right-click the Scrapbook in the bottom right corner of the Media Store window, and then select Add.

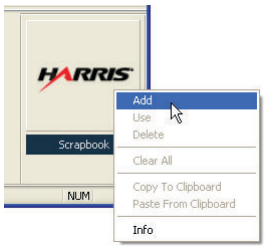


Figure 7-13. Add a Media File to the Scrapbook

3 Switch to the Media Store module: on the toolbar, click the Media Store button.

4 In the Scrapbook, right-click the media to add to the Build set, and then select Use. The Build Media Store dialog opens with the file added.

Add Files from Other Applications

You can add media files from other applications to the Build set.

1 In the application, copy the media to the Windows clipboard by using the Edit menu or by pressing CTRL+C.

2 Open or switch to TitleOne.

3 Switch to the Media Store module: on the toolbar, click the Media Store button.

4 Select Edit > Paste Image. The Build Media Store dialog opens with the file added.

View Files Selected for Build

To view the media files in the Build set (folio), click the Build button on the Media Store toolbar. The Media window displays the files in the Build set. If

you are in browse mode, Media Store switches to database mode

Figure 7-14. Build Set

Set Titles and Keywords

Before you add a file to the database, you must set a title and at least one keyword. You can search for or sort files using titles and keywords.

You can set a default title or list of keywords for all media files. For more information, see "Set the Default Title and Keywords" on page 431.

To add or edit the titles and keywords of files you are adding to your database, complete the following steps.

1 To open the Build Media Store dialog, click the Add to the Store button on the Media Store palette. The Build dialog lists all the files in the Build set. See Figure 7-11 on page 390 and Figure 7-12 on page 391.

2 In the Build Set area, select a file.

3 In the Image Storage area, add or edit the title. Ensure that you use a descriptive title so that you can easily search for the file.

4 In the Image Storage area, add or edit the list of keywords. Separate entries with a space character. Enter keyword phrases with quotation marks.

    flags international “Canadian flag” patriotism

    It is recommended that you create a plan for creating keywords. Consistently apply your plan when adding keywords. Keyword lists should include general information about the file (for example, orientation and project) and specific details (for example, nouns and adjectives that describe the contents).

5 For each file in the Build set, repeat steps 2-4.

When adding a title and keywords to a media file, you can also:

- Spell check the title or keywords. See "Spell Checker" on page 394.
- Search for synonyms or antonyms. See "Thesaurus" on page 395.
- Set media options for an image file. See "Set Media Options" on page 398.

You can edit the title and keywords assigned to a media file after you build it into a database. You can also add a memo to a database media file. For more information, see "Update Thumbnails" on page 406.

Spell Checker

When you are building media into a database, use the Spell Checker functionality to verify the spelling of the title and keywords. By using correct spelling, you can more easily find files in the database.

1 To open the Build Media Store dialog, click the Add to the Store button on the Media Store palette. The Build dialog lists all the files in the Build set. See Figure 7-11 on page 390 and Figure 7-12 on page 391.

2 In the Build Set area, select a file.

3 To verify the spelling of text in the Title or Keywords field, click the Spell Checker button beside the field.

If any text is unrecognized, the Suggestions dialog opens.

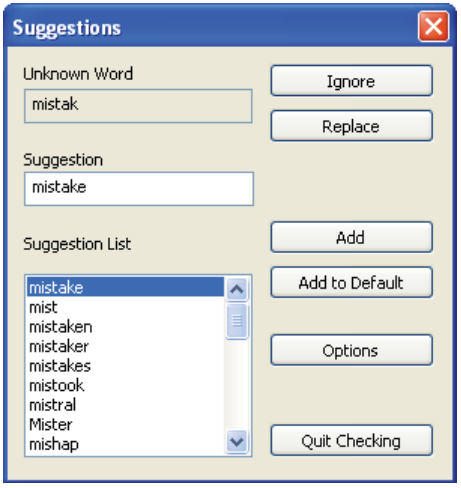


Figure 7-15. Suggestions Dialog

4 Using the Suggestions dialog, review all unrecognized words.

- To replace the unknown word with the word in the Suggestion field, click the Replace button.
- To replace the unknown word with a word in the Suggestion List, click the replacement word and then click the Replace button.
- To add the unknown word to the dictionary, click the Add or Add to Default button.
- To update how the Spell Checker selects misspelled words, click the Options button and then select the options to enable.

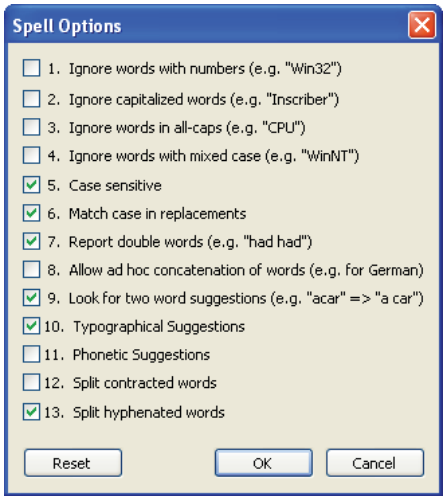

Spell Options
1. Ignore words with numbers (e.g. "Win32")
2. Ignore capitalized words (e.g. "Inscriber")
3. Ignore words in all-caps (e.g. "CPU")
4. Ignore words with mixed case (e.g. "WinNT")
5. Case sensitive
6. Match case in replacements
7. Report double words (e.g. "had had")
8. Allow ad hoc concatenation of words (e.g. for German)
9. Look for two word suggestions (e.g. "acar" => "a car")
10. Typographical Suggestions
11. Phonetic Suggestions
12. Split contracted words
13. Split hyphenated words
Reset
OK
Cancel

Figure 7-16. Spell Options Dialog

- To close the Suggestions dialog before reviewing all unknown words, click the Quit Checking button.

5 For each file in the Build set, repeat steps 2-4.

Thesaurus

When you are building media into a database, use the Thesaurus functionality to find synonyms or antonyms to use in the title or keyword list. By adding synonyms, you can more easily find files in the database.

1 To open the Build Media Store dialog, click the Add to the Store button on the Media Store palette. The Build dialog lists all the files in the Build set. See Figure 7-11 on page 390 and Figure 7-12 on page 391.

2 In the Build Set area, select a file.

3 To search for synonyms or antonyms of text in the Title or Keywords field, click the Thesaurus button beside the field. The Thesaurus dialog opens.

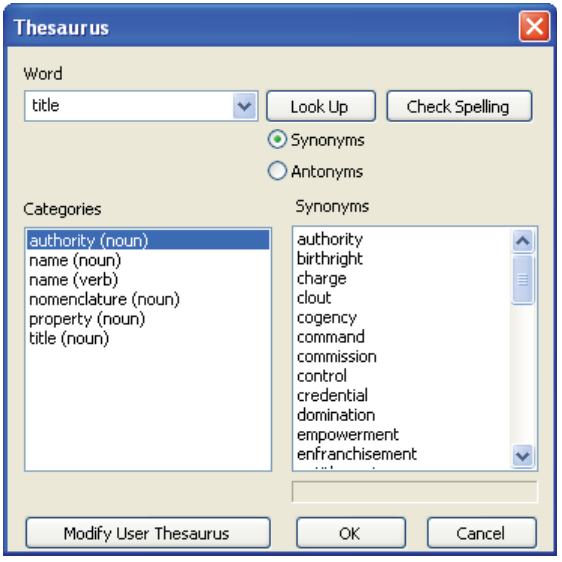


Figure 7-17. Thesaurus Dialog

4 If the title or keywords list contains multiple words or phrases, edit the text in the Word list to search for synonyms or antonyms of one word or phrase.

5 By default, the Thesaurus searches for synonyms. To search for antonyms, select the Antonyms option.

6 To perform the search, click the Look Up button.

7 If no matches are found, verify the spelling.

a Click the Check Spelling button. The Spelling Suggestions dialog opens.

b To select one of the suggestions, double-click the correctly spelled entry.

8 Results are organized by category. Click the appropriate category.

9 To replace the original word or phrase, double-click an item in the Synonyms or Antonyms list.

10 Click OK.

11 For each file in the Build set, repeat steps 2-10.

In addition to the built-in thesaurus, Media Store has a user thesaurus that you can customize.

1 In the Thesaurus dialog, click the Modify User Thesaurus button. The Modify User Thesaurus dialog opens.

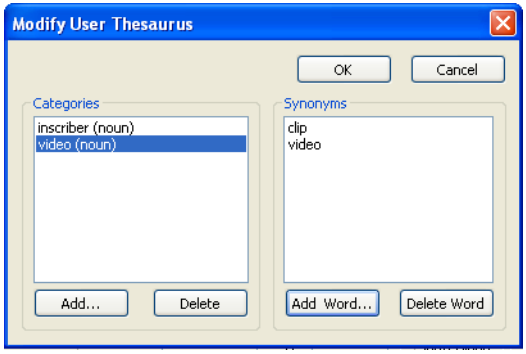


Figure 7-18. Modify User Thesaurus Dialog

2 To add a new category of synonyms, complete the following steps.

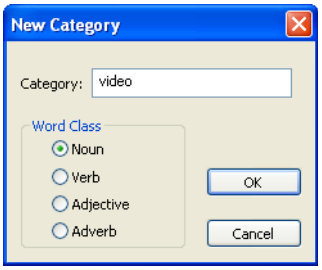
a In the Categories area, click the Add button. The New Category dialog opens.

b In the Category field, enter the category name.

The category name is automatically added as a synonym in the category.

c In the Word Class area, select the part of speech for the category.

d Click OK.



3 To add a synonym to a category, complete the following steps.

a In the Categories area, select the category to add the synonym to.

b In the Synonyms area, click the Add Word button.

c In the New Word dialog, enter the new synonym. Click OK.

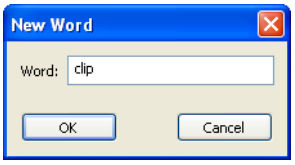


Figure 7-19. New Word Dialog

4 To remove a synonym from a category, complete the following steps.

a In the Categories area, select the category to remove the synonym from.

b In the Synonyms area, select the synonym to remove.

c In the Synonyms area, click the Delete Word button.

5 To remove a category, remove all its synonyms.

6 To save your changes to the user thesaurus, click OK.

Set Media Options

In addition to the mandatory title and keyword for each file, you can specify media storage options for image files.

1 To open the Build Media Store dialog, click the Add to the Store button on the Media Store palette. The Build dialog lists all the files in the Build set. See Figure 7-11 on page 390 and Figure 7-12 on page 391.

2 In the Build Set area, select a file.

3 To include the file in the database, select the Include Image checkbox (only image files can be included). To create a reference to the file in the database, clear this checkbox.

Including files ensures that they are available and provides fast retrieval, but requires a potentially large amount of disk space on a single drive.

4 In the Image Storage area, select the image size option for the file.

Table 7-6. Image Size Options

Option	Description
Original Res	Use default file size. If the image is larger than the screen, it is cut off when displayed.
Size to Fit	Image always displays at largest size possible, but maintains aspect ratio (no distortion).
Size to Full Screen	Image fills the screen, which may distort the image.

5 If you include a file, you can apply compression to it to reduce disk requirements. In the Image Storage area, select the compression option for the file.

Table 7-7. Image Compression Options

Option	Loss	Description
LZW	No	• Photographic images achieve 25-50% compression. • Suitable for all files. • Slowest compression method.

Table 7-7. Image Compression Options

Option	Loss	Description
HKF	Yes	• I6- and 24-bit photographic images achieve at least I0:I compression. • Not suitable for 32-bit images (because it causes loss of the alpha channel), 8-bit images, or most computer-generated images. • Combined with less than full screen sizing, images display surrounded by black (not alpha).
VII	No	• Some files achieve over 20:I compression. • Suitable for computer-generated images, including graphic pages from CG. • May compress photographic images. • Fastest compression method.
Best Lossless	No	• Performs both LZW and VII compression. If one file is smaller, it chooses that compression method. Otherwise, no compression is applied. • Suitable when adding various file types.

6 For each media file, repeat steps 2-5.

Build a Database

The final step in creating (or adding files to) a Media Store database is to build it.

I To open the Build Media Store dialog, click the Add to the Store button on the Media Store palette. The Build dialog lists all the files in the Build set. See Figure 7-II on page 390 and Figure 7-I2 on page 39I.

2 To build the database, click the Build All button.

OR

To add only the files selected in the Build Set area, click the Build Selected button.

Note: It is recommended that you build a database when you are not working in Media Store, for example, overnight or over a weekend.

View Database Files

To view the media files in the current Media Store database, click the Global button on the Media Store toolbar. Media Store displays the database media files in the Media window.

Note: Ensure that the Browse button on the toolbar is not selected. If you are browsing files (see "Browse Media Files" on page 385), click the Browse button on the Media Store toolbar (so that it is not selected) to view database files.

When you are viewing database files, Media Store displays the database mode toolbar. See Figure 7-5 on page 380.

The buttons on the Media Store toolbar control the folio displayed in the Media window.

Table 7-8. Database Folios

Button	Function
Global	Displays the media files in the current database.
Set	Displays search results from your last database search.
FI-FI2	Collection folios that you can use to organize files. To add media to these folios, drag thumbnails from the media window to a collection folio button. For more information, see "Collection Folios" on page 402.
Local/System	Switches the collection folio buttons (FI-FI2) between the Local collection folios and the System collection folios. For more information, see "Collection Folios" on page 402.

For more information on database mode, see "Media Store Toolbar and Modes" on page 378.

Collection Folios

You can group media files displayed by the Global button (Global folio) or the Set button (Set folio) into collection folios. The Set folio contains your most recent search results. You can group media using any criteria you choose, for example, by client, playlist, or contents.

1 Ensure that the Browse button is not selected on the Media Store toolbar, and then click the Global Database button or the Set button.

2 To place a copy of a file into a folio, drag the its thumbnail from the Media window to a collection folio button (F1-F12) on the toolbar. You can add a media file to more than one folio. Organizing your media files in folios allows you to group related media files.

- To organize your media files into categories that are available to only you, ensure that the Local/System button reads Local before dragging thumbnails to the F1-F12 buttons.
- To organize your media files into categories that are available to all users, ensure that the Local/System button reads System before dragging thumbnails to the F1-F12 buttons.

Note: Media files added to a collection folio remain in the source folio; they are not deleted.

3 To view the media files in the folios, click the F1-F12 buttons.

- To view media files available to only you, ensure that the Local/System button reads Local before clicking a toolbar button.
- To view media files available to all users, ensure that the Local/System button reads System before clicking a toolbar button.

Set Up an Existing Database

You can access Media Store databases that you did not create. To set up access, specify the location of the database and set the locations for the user folios and the browsed files. (You set up access to your databases when you create them. See "Create a Database Location" on page 388.)

1 Select File > Preferences. The Preferences dialog opens.

2 In the Preferences dialog, switch to the Store Paths tab. You enter the information for the existing database in the Store Locations area at the bottom of the tab.

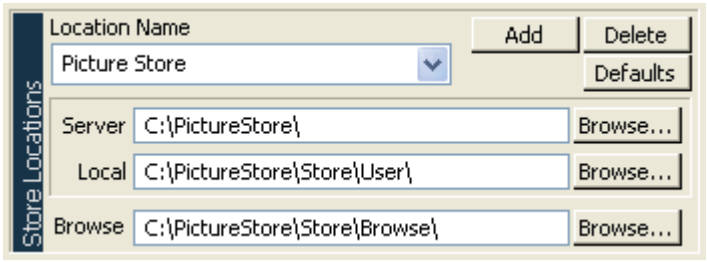


Figure 7-20. Access an Existing Database

3 In the Location Name field, enter a name for the database.

4 In the Server field, enter the database path, or click the Browse button and navigate to the database.

5 In the Local field, enter the local path for the user folios, or click the Browse button and navigate to the local path.

6 In the Browse field, enter the network path for the browsed files, or click the Browse button and navigate to the network path.

7 Click the Add button. You can now access the database in Media Store.

8 To close the Preferences dialog, click OK.

Switch Current Database

Media Store supports the use of multiple Media Store databases. To access a database that you did not create, you must first set up access to the database. For more information, see "Set Up an Existing Database" on page 402.

You can switch between databases using the following three methods.

1 Select File > Media Store List. The submenu lists all the databases that you have access to. The current database has a checkmark beside it.

2 From the submenu, select the database to view.

OR

1 Select Media Store > Switch Current Media Store To. The submenu lists all the databases that you have access to. The current database has a checkmark beside it.

2 From the submenu, select the database to view.

OR

1 In the navigation pane, click the plus symbol (+) beside Stores. The Media Store database list displays.

2 From the Media Store database list, select the database to view.

Fix Database Issues

If you encounter database problems with your Media Store databases, use the Media Store tools to recover.

Rebuild a Database

To rebuild your database:

1 Select File > Media Store Utilities > Rebuild Database.

Note: Rebuilding your database creates a new Global folio and deletes all other database folios (Global Set and collection folios).

Recover a Database

If the File > Media Store Utilities > Rebuild Database command does not fix your database problems, you can manually rebuild the Media Store database. Media Store uses metadata files (see "Metadata" on page 386) to help recover the Attributes palette settings, such as the title, keywords, and transition information, for all your media files.

To restore your database, complete the following steps.

1 If your Media Store database is corrupt, delete its folder.

To determine the location of your database folder:

a Select File > Preferences.

b Switch to the Store Paths tab.

c In the Store Locations area, the Server field displays the database folder.

2 Add each media file to the Build set. For more information, see "Add Browsed Files" on page 389.

Note: To add frame grabs, you must browse to the folder that contains the images (specified by the FrameGrabDirectory entry in the [Preferences] section of the Inscribe.ini file).

3 Open the Build Media Store dialog. See Figure 7-11 on page 390 and Figure 7-12 on page 391.

4 For each media file, set media options. Media options specify the following.

- Whether to include an image in the database or simply reference it
- Image size
- Image file compression (only for included images)

For more information, see "Set Media Options" on page 398.

Note: The title and keyword list are automatically recovered.

5 Build the media files into the database. For more information, see "Build a Database" on page 400.

Media Store automatically recovers the attribute information for each media file from its corresponding metadata file.

Update Thumbnails

You can control how the thumbnails display in the Media window and update the descriptive information for thumbnails selected in the Media window.

- Monitor media files in browsed folders for updates.
- Change the size of the thumbnails.
- Change the order of the thumbnails using sort methods.
- Edit the title and keywords assigned to one or more media files. Using titles and keywords, you can easily search for media files.
- Add a memo to a database media file.
- Delete a file from disk, a folio, or a database.

For information on changing the text that displays below thumbnails, see "Change the Thumbnail Text" on page 430.

For information on assigning database media files to collection folios (F1-F12), see "Collection Folios" on page 402.

Feature Note Media Store is a purchase option in TitleOne.

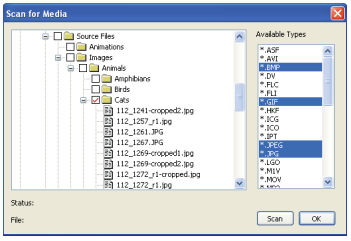
Scan Files for Updates

The Scan dialog lets you monitor browsed folders for changes to media files. Scanning the files forces Media Store to check the selected files and update the Media window with any changes.

1 Switch to browse mode: ensure that the Browse button on the toolbar is selected.

2 To open the Scan dialog, click the Scan button on the toolbar.

3 In the Scan for Media dialog, select the checkboxes beside the folders to scan for updates.



4 Limit the number of scanned files by selecting a file type from the list on the right side of the dialog. To select multiple file types, use the SHIFT or CTRL key. Media Store scans all media files in a folder for changes if no file types are selected.

To scan the files for updates, click the Scan button in the dialog.

Resize Thumbnails

You can change the render size that stamps are built at, or simply change the display size of the thumbnails.

To force a rebuild of all stamps in the current database:

1 Click the Media Store menu.

2 From the Set Stamp Render Size menu item, select one of the sizes: Very Large, Large, or Standard.

To view more thumbnails on-screen, display the thumbnails in the Media window at a size smaller than the default stamp size.

1 Click the Media Store menu.

2 From the Set Stamp Display Size menu item, select one of the sizes: Default Stamp Size, 3/4 Rendered Stamp Size, 2/3 Rendered Stamp Size, or 1/2 Rendered Stamp Size.

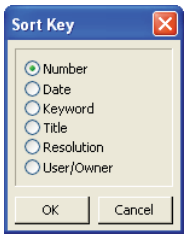
3 To display a large preview of a single media file in the Media window, hover the mouse pointer over the thumbnail label. See Figure 7-2 on page 377.

Sort Media Files

By default, files in the Media window are sorted by the media number assigned by Media Store. You can change the sort order so that Media Store sorts the files by date, keyword, title, resolution, or user/owner.

Note: You cannot change the display order of the thumbnails in the Browse (BI) folio. They are always sorted by media number.

To change the sort order for the items, use the Sort functionality.



1 Select Media Store > Sort.

2 In the Sort Key dialog, select a sort option.

3 Click OK.

Browse Folios

Browse Set - The sort order is used until you perform another search. New search results are sorted by media number.

Global Browse - The sort order you select is set as the default sort order for this folio. The Global Browse folio uses this sort method until you select a new sort method using the Sort functionality.

Database Folios

The sort order is used in only the current Media window. When you close TitleOne or change folios, the sort order resets to the default database sort order.

To change the default database sort order, use the Preferences dialog. For more information, see "Set the Default Database Media Sort Order" on page 431.

Edit a Title

You can edit the title assigned to a browsed media file or a database media file.

- For a browsed media file, the default title is the filename.
- For a database media file, you must assign a title when you add the file to a database.

To edit the title of a file, complete the following steps.

1 Ensure that the Browse button is in the correct position: selected to update a browsed file, not selected to update a database file.

2 Select a folio that contains the file to update.

3 In the Media window, select the thumbnail.

4 In the Attributes palette at the bottom of the window, select the Key Info tab.

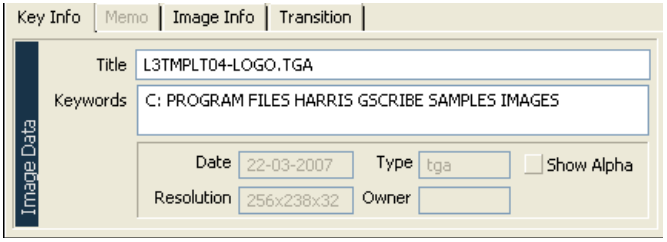


Figure 7-21. Attributes Palette - Key Info Tab

5 In the Title field, edit the title.

6 To save the changes, press ENTER on the main keyboard.

You can also edit multiple titles by appending the same text to the existing titles or replacing the existing titles with the same text.

1 Ensure that the Browse button is in the correct position: selected to update a browsed file, not selected to update a database file.

2 Select a folio that contains the files to update.

3 To select multiple thumbnails in the Media window, use the SHIFT or CTRL key.

4 In the Attributes palette at the bottom of the window, select the Key Info tab.

5 In the Title field, edit the title.

6 To append the entered text to the existing titles, press CTRL+ENTER. Use the ENTER key on the main keyboard.

OR

To replace the existing titles with the entered text, press SHIFT+ENTER. Use the ENTER key on the main keyboard.

Edit Keywords

Keywords are descriptive words assigned to media files. Once you assign keywords to a media file, you can search for the file using keywords.

You can edit the keywords assigned to a browsed media file or a database media file.

- For a browsed media file, the default keywords are the words in the file

path.

- For a database media file, you must assign at least one keyword when you add the file to a database.

To edit the keyword list of a file, complete the following steps.

1 Ensure that the Browse button is in the correct position: selected to update a browsed file, not selected to update a database file.

2 Select a folio that contains the file to update.

3 In the Media window, select the thumbnail.

4 In the Attributes palette at the bottom of the window, select the Key Info tab. See Figure 7-21 on page 409.

5 In the Keywords field, update the keyword list.

6 To save the changes, press ENTER on the main keyboard.

You can also add keywords to multiple files or replace the keywords assigned to multiple files.

1 Ensure that the Browse button is in the correct position: selected to update a browsed file, not selected to update a database file.

2 Select a folio that contains the files to update.

3 To select multiple thumbnails in the Media window, use the SHIFT or CTRL key.

4 In the Attributes palette at the bottom of the window, select the Key Info tab.

5 In the Keywords text field, enter the keywords to add.

6 To add the keywords to the selected files, press CTRL+ENTER. Use the ENTER key on the main keyboard.

   OR

   To replace the existing keywords with the entered keywords, press SHIFT+ENTER. Use the ENTER key on the main keyboard.

Add a Memo

For only database media files, you can add notes about files, such as the source, copyright, permissions, and history.

1 Switch to database mode: ensure that the Browse button on the toolbar is not selected.

2 Select a folio that contains the file to update.

3 In the Media window, select the thumbnail.

4 In the Attributes palette at the bottom of the window, select the Memo tab.

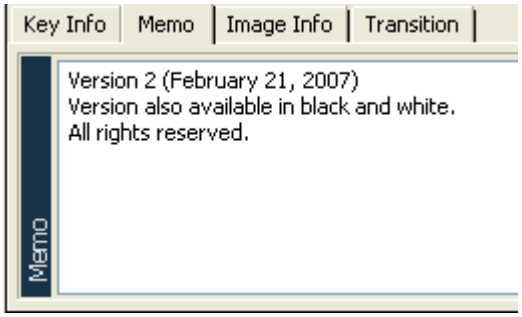


Figure 7-22. Attributes Palette - Memo Tab

5 In the text field, enter text to describe the file. The window scrolls if necessary.

6 On the Media Store palette, click the Update Image Info button.

Delete Media Files

You can delete files in browse mode or database mode. In browse mode, you delete the file from disk. In database mode, you can delete a file from one folio or all folios and can also delete the file from disk.

Delete a File from Disk

You can delete media files from disk when browsing in the Media window.

1 Switch to browse mode: ensure that the Browse button on the toolbar is selected.

2 In the navigation pane, select the folder that contains the file to delete.

3 In the Media window, right-click the thumbnail and then select Delete from the menu.

4 In the confirmation dialog, click OK.

Delete a Media File from a Database

You can delete a media file from a Media Store database folio without deleting the file from the database.

1 Switch to database mode: ensure that the Browse button on the toolbar is not selected. Otherwise, you will delete the file from disk.

2 Select the folio to delete the file from.

3 In the Media window, right-click the thumbnail.

4 From the right-click menu, select Delete. The file is deleted from the folio.

You can also delete a media file from a database. The file is removed from all folios.

1 Switch to database mode: ensure the Browse button on the toolbar is not selected. Otherwise, you will delete the file from disk.

2 Select the Global folio.

3 In the Media window, right-click the thumbnail.

4 From the right-click menu, select Delete.

5 In the confirmation dialog, you can select whether to delete the source file from disk.

- To delete the file from the database, but leave the source file on disk, click No.
- To delete the file from the database and disk, click Yes.

Search for Media

You can scroll through media files in Media Store databases or browse drives and folders using the navigation pane to find a file. If you have many media files, this is a tedious process.

To find media files quickly, use the Find and Search dialogs. Search criteria can be simple or combine multiple search keys, such as title, date, keywords, and media number.

- Search for all the files that match your search criteria. For more information, see "Perform a Search" on page 413.
- Find the first (or next) file that matches your search criteria. For more information, see "Find a File" on page 416.
- Reuse search criteria to search for and find files more quickly. For more information, see "Search Using Previous Search Criteria" on page 418.

When searching, you can display or select the search results.

- Display only the files that match your search criteria in the Media window. For more information, see "Display All Search Results" on page 418.
- Select the files that match your search criteria in the Media window, but display all the files in the searched folio. For more information, see "Select All Search Results" on page 419.

Feature Note Media Store is a purchase option in TitleOne.

Perform a Search

After selecting a folio to search, you specify search criteria based on the following search keys.

- Keywords
- Media resolution
- Title
- Media type
- User name
- Media number

- Date

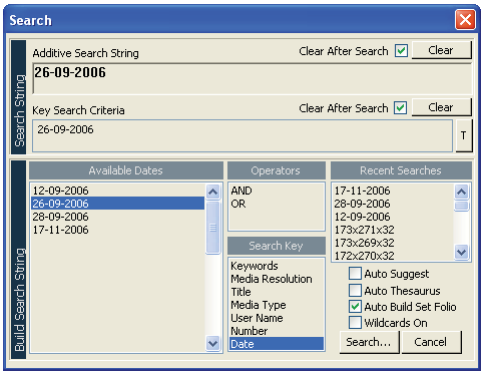


Figure 7-23. Search Dialog

Search criteria can be simple with a single search key or complex with multiple search keys and operators. You can also access previous search criteria.

To search for a single file that matches your criteria, use the Find dialog. If you know the media number of and folio containing the media file, you can quickly select it by entering the media number in the Shot Box.

Set Up a Simple Search

Media Store allows you to search for files based on keywords, media resolution, title, media type, user name, media number, and date. You can search for media in any folio except the Build set.

1 Using the buttons on the toolbar, display the media to search in the Media window.

2 To open the Search dialog, click the Search button on the Media Store palette.

3 From the Search Key list, select a search key.

Table 7-9. Search Keys

Search Key	Description
Keywords	Descriptive words assigned to the media file

Table 7-9. Search Keys

Search Key	Description
Media Resolution	Resolution of the media file
Title	Name assigned to the media file
Media Type	File format of the media file
User Name	User who added the media file
Number	Media number assigned by Media Store
Date	File creation date

4 In the Available attributes list, double-click an attribute value. The attribute appears in the Key Search Criteria field.

5 To perform the search, click the Search button.

Set Up an Advanced Search

Advanced searches help to set your search parameters by narrowing or expanding your search criteria. You can search for media in any folio except the Build set.

1 Using the buttons on the toolbar, display the media to search in the Media window.

2 To open the Search dialog, click the Search button on the Media Store palette.

3 From the Search Key list, select a search key. For descriptions of search keys, see Table 7-9 on page 414.

4 In the Available attributes list, double-click an attribute value.

OR

In the Operators list, double-click * or ?. For operator descriptions, see "Use Search Operators" on page 416.

The criterion appears in the Key Search Criteria field.

5 If necessary, add additional criteria.

To add criteria using the same search key, repeat the following steps.

a In the Operators list, double-click an operator (AND, OR, NOT). For operator descriptions, see "Use Search Operators" on page 416.

b Specify the attribute value using the Available attributes or Operators list.

To add criteria using a different search key, repeat the following steps. An AND operator is automatically inserted between criteria.

a From the Search Key list, select another search key.

b Specify the attribute value using the Available attributes or Operators list.

6 To perform the search, click the Search button.

Use Search Operators

An advanced search (see "Set Up an Advanced Search" on page 415) uses multiple search criteria with operators. The operators help to set your search parameters by narrowing or expanding your search criteria.

Table 7-10. Search Operators

Operator	Function
*	Matches any value
?	Matches any single character
AND	Both the previous and the following criteria must be matched
OR	Either the previous or the following criteria must be matched
NOT	The following criterion must not be matched

Find a File

The Find dialog selects individual search results based on the criteria set in the Key Search Criteria field. The Find dialog closes after a search and selects the first media file that matches the search criteria in the Media

window.

1 Using the buttons on the toolbar, display the media to search in the Media window.

2 Open the Find dialog (Media Store > Find).

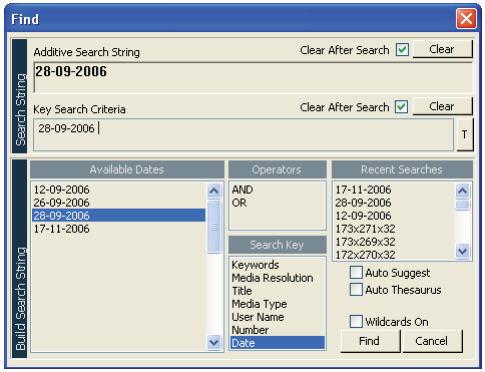


Figure 7-24. Find Dialog

3 Add attributes to the Key Search Criteria field. For more information, see "Set Up a Simple Search" on page 414 or "Set Up an Advanced Search" on page 415.

4 Click the Find button. The dialog closes and Media Store selects the first media file matching the search criteria in the Media window.

5 To select the next file matching the search criteria, select Media Store > Find Again.

Find a File Using the Shot Box Palette

In the Shot Box palette, you can access a media file using its media number. For general information about the Shot Box, see "Shot Box Palette" on page 383.

1 On the Shot Box palette, click the Store/Play toggle button to read Store. (If the button reads Play, the Shot Box searches for playlists.)

2 Using the buttons on the toolbar, display the media to search in the Media window.

3 In the Shot Box Number field, enter the media number. (To quickly set the focus to the Number field, press the F12 key.)

4 To select the media file, click the Find button on the Shot Box palette or press the ENTER key on the main keyboard--not the ENTER key on the number pad.

OR

To preview the file in the Preview window of the Program/Preview palette, click the Preview button on the Shot Box palette. For more information on the Program/Preview palette, see "How Do I Use the Program/Preview Palette?" on page 13.

Search Using Previous Search Criteria

Previous search criteria are saved in the Recent Searches list.

1 Using the buttons on the toolbar, display the media to search in the Media window.
2 To open the Find or Search dialog, click the Find button or Search button on the Media Store palette.
3 In the Recent Searches list, double-click the appropriate entry.
4 Edit the search criteria.
5 To perform the search, click the Find or Search button.

Search Results

Search dialog results can be used in several ways. You can choose to display only the search results that match your criteria or you can select the search results in the Media window while still displaying all the files in the searched folio.

To allow you to refer to the most recent search results in browse mode and database mode, you can assign your last search results to the Browse Set folio (in browse mode) or the Set folio (in database mode).

You can also define a playlist using search results. For more information, see "Create a Playlist from Search Results" on page 426.

Display All Search Results

You can display the results from the Search dialog.

1 In the Search dialog, define search criteria. For more information, see "Set Up a Simple Search" on page 414 or "Set Up an Advanced Search" on page 415.
2 Click the Search button.

- If the Auto Build Set Folio checkbox is selected, the Search dialog closes after the search with the search results displayed in the Media window. The search results are assigned to the Set or Browse Set folio. For more information on these folios, see "Set and Browse Set Folios" on page 420.
- If the Auto Build Set Folio checkbox is cleared, the search results are displayed at the bottom of the Search dialog.

  You can view the results as thumbnails or a text list. To switch views, click the List/Thumbnail toggle button in the top right corner of the Search Results area.

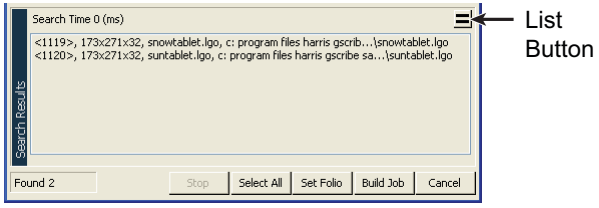


Figure 7-25. Search Results - List View

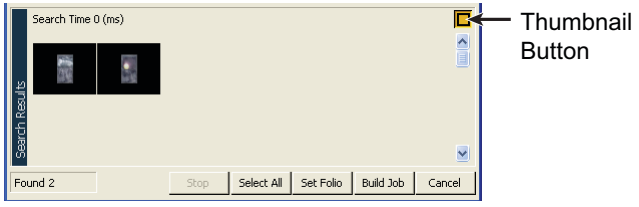


Figure 7-26. Search Results - Thumbnail View

To display the search results in the Media window and assign the results to the Set or Browse Set folio, click the Set Folio button. (For more information on these folios, see "Set and Browse Set Folios" on page 420.) When you click the Set Folio button, the Search dialog closes.

Select All Search Results

You can use the Select All button to select all of your search results in the Media window. Other files in the searched folio still display in the Media window, but only the results are selected. For example, if you are searching

your Media Store database files, use the Select All button to select only the database files that match your search criteria.

1 In the Search dialog, define search criteria. For more information, see "Set Up a Simple Search" on page 414 or "Set Up an Advanced Search" on page 415.

2 Clear the Auto Build Set Folio checkbox.

3 Click the Search button. The search results are displayed at the bottom of the Search dialog.

4 To select all the results in the Media window, click the Select All button. When you click the Select All button, the Search dialog closes.

Note: The Set and Browse Set folios are not updated when you select all search results. For more information on these folios, see "Set and Browse Set Folios" on page 420.

Set and Browse Set Folios

The Set and Browse Set folios contain your most recent database search results and browse search results, respectively. For more information on database and browse modes, see "Media Store Toolbar and Modes" on page 378.

To display the Set folio files, click the Set button on the Media Store toolbar in database mode.

Figure 7-27. Database Mode Toolbar - Set Button

To display the Browse Set folio files, click the Browse Set button on the Media Store toolbar in browse mode.

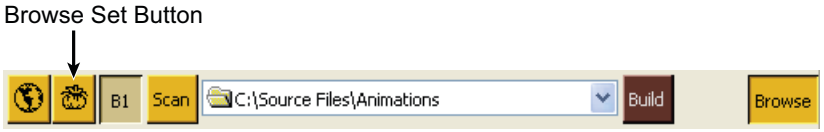


Figure 7-28. Browse Mode Toolbar - Browse Set Button

You can refine the search results in the Set or Browse Set folio by searching the media files in one of these folios.

Use Media Files

In addition to viewing thumbnail previews of media files in the Media window and previewing files in the Program/Preview palette, you can also check files, set transition effects, and trim video clips before using them.

- Verify that the media files are available for use. For more information, see "Check Media File Reference" on page 422.
- View the transparency levels of media files. For more information, see "View Media File Transparency" on page 423.
- Set default transition effects for media files. For more information, see "Set Transition Effects" on page 423.
- Trim video clips if they are too long or have extra content at the beginning or end. For more information, see "Set Transition Effects" on page 423.

Media Store provides many ways to quickly use media files, such as clicking or dragging thumbnails in the Media window and using the Shot Box palette.

- Add media files to the playlist at the left side of the window, and then switch to another module to update or use the playlist. For example, you can use the Sequencer module to edit timing and trigger options. For more information, see "Add Media Files to the Playlist" on page 425.
- Take media files to video. For time-critical output, assign media files to Shot Box Defined buttons: you can take an assigned file to video with a single-click. For more information, see "Take Media Files to Video" on page 427.

Feature Note Media Store is a purchase option in TitleOne.

Check Media Files

Before using media files, you can check the files.

- Verify that a media file is available for use
- View the transparency levels of a media file

For information on previewing media files in the Program/Preview palette, see "How Do I Use the Program/Preview Palette?" on page 13.

Check Media File Reference

To check whether a media file is referenced correctly in the Media window,

select the thumbnail in the Media window and then select Media Store > Check Reference.

- If Media Store displays a message stating that the media file is available, you can use the file in the playlist or take it to video.
- If Media Store displays a message stating that the media file is not available, the file cannot be used.

Note: Image files that are included in a Media Store database (instead of simply referenced) are always available.

View Media File Transparency

You can view the transparency levels of the media thumbnails in the Media window.

1 To preview the media file transparency levels, right-click a thumbnail in the Media window.

2 Select Show Alpha from the right-click menu. The thumbnail displays the transparency levels of the file.

- Black indicates completely transparent areas.
- White indicates completely opaque areas.
- Shades of gray indicate different levels of transparency.

3 To view the original full-color preview, right-click the thumbnail and then select Show Alpha to remove the checkmark.

Set Transition Effects

You can set default transition effects for a media file, including trimming and looping video clips.

1 In the Media window, select the thumbnail.

2 In the Attributes palette at the bottom of the window, select the Transition tab.

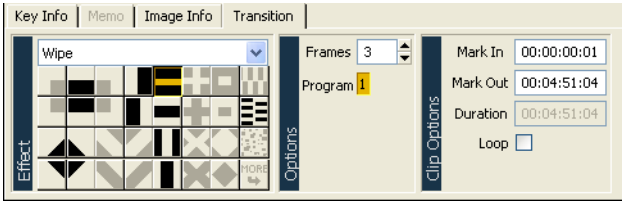


Figure 7-29. Attributes Palette - Transition Tab

3 Select a transition type, such as Wipe or Dissolve, from the list.

4 Select a transition direction by clicking one of the buttons below the transition type list.

5 In the Frames field, enter the duration for the transition.

6 To set an output channel, click one of the Program buttons.

7 For video clips, you can set the trim in and trim out times, and loop the clip. The Duration field displays the clip duration.

   a In the Mark In field, enter a new in point for the clip.

   b In the Mark Out field, enter a new out point for the clip.

   c To loop the clip, select the Loop checkbox.

8 On the Media Store palette, click the Update Image Info button.

   The Scissors icon displays in the bottom-right corner of the media file thumbnail to indicate that a transition has been set for the file.

Figure 7-30. Scissors Icon

The transition information is included with the media file each time you add it to the playlist. To adjust the transition, use the Sequencer module. For

more information, see "Apply Transitions" on page 325.

Add Media Files to the Playlist

There are many methods that add media files to the playlist.

- Drag a media file from the Media window to the playlist.
- In the Search dialog, click the Build Job button to create a playlist using the results of a search.
- Drag a folio from the toolbar to create a playlist using the media files in a folio.
- Use the Shot Box palette to quickly add one or more media files to the playlist.

Add Media Files from the Media Window

To add a media file to the playlist, drag the media file from the Media window to the playlist.

1 Using the buttons on the toolbar, display the media to add in the Media window. For example, to display Media Store database files, click the Global Database button.

2 Drag a thumbnail from the Media window to the playlist. You can insert the file above, below, or as a replacement for the active playlist event. The cursor indicates where the file will be inserted.

Table 7-11. Media Insertion Cursor

Cursor	Description
	Inserts the new event above the active event
	Replaces the active event with the new event
	Inserts the new event below the active event

To set the file as a logo, texture, or background, use the following key combinations when you drag the file.

- CTRL-drag adds the file to the playlist as a logo.
- CTRL+SHIFT-drag adds the file to the playlist as a texture.
- CTRL+ALT+SHIFT-drag adds the file to the playlist as a background.

Create a Playlist from Search Results

You can create a playlist from your search results.

1 In the Search dialog, define search criteria. For more information,
2 see "Set Up a Simple Search" on page 414 or "Set Up an Advanced Search" on page 415.
3 Clear the Auto Build Set Folio checkbox.
4 Click the Search button. The search results are displayed at the bottom of the Search dialog.
5 To create the playlist, click the Build Job button. Media Store prompts you to save the current playlist before placing the search results in a new playlist.

Note: This operation replaces the existing playlist with a new playlist.

Create a Playlist from a Folio

To define a playlist using the contents of a Media Store database folio, drag the folio to the playlist.

1 Drag a database folio from the Media Store toolbar to the playlist.
2 In the dialog, specify whether to save the previous playlist.

Note: This operation replaces the existing playlist with a new playlist.

Add Media Files to the Playlist Using the Shot Box Palette

Using the Shot Box, you can quickly add files to the playlist. For general information about the Shot Box, see "Shot Box Palette" on page 383.

1 Using the buttons on the toolbar, display the media to add in the Media window.

2 On the Shot Box palette, click the Store/Play toggle button to read Store. (If the button reads Play, the Shot Box searches for playlists.)

3 To enable the Learn mode, click the LRN (Learn Mode) button on the Shot Box palette.

4 In the playlist, select the item that will precede the media file.

5 Select the folio containing the media files to insert. The media files display in the Media window.

6 In the Shot Box Number field, enter the media number of the file to insert. The media number for a file is displayed below its thumbnail in the Media window. (To quickly set the focus to the Shot Box Number field, press the FI2 key.)

7 To add the file below the selected playlist item, click the Take button on the Shot Box palette or press the ENTER key on the number pad--not the ENTER key on the main keyboard.

Note: The file is also output on the active output channel. See "Take Media Files Using the Shot Box Palette" on page 428.

8 To add more media files to the playlist, repeat steps 4 to 7.

9 To disable the Learn mode, click the LRN (Learn Mode) button on the Shot Box palette.

Take Media Files to Video

You can easily take media files in Media Store to video.

Use one of the following methods to take your media file.

- Double-click the thumbnail in the Media window.
- Drag the thumbnail from the Media window to the Program palette.
- Select the thumbnail in the Media window or enter the file's media number in the Shot Box Number field, and then click the Take button on the Shot Box palette. Ensure that the LRN button is not selected on the Shot Box palette. For more information, see "Take Media Files Using the Shot Box Palette" on page 428.
- Click one of the four Shot Box Defined buttons on the Shot Box palette. For more information, see "Set Up Media Files for Single-Click Takes" on page 428 and "Take Media Files Using the Shot Box Palette" on page 428.
- Select the thumbnail in the Media window and press the ENTER key on your keyboard number pad.

Set Up Media Files for Single-Click Takes

Using the Shot Box Defined buttons, you can output a Media Store database media file in real-time with a single click. The Shot Box palette contains four Defined buttons that you can assign media files to. For general information about the Shot Box, see "Shot Box Palette" on page 383.

1 Select the database folio containing the media file to assign to a Defined button. The folio's media files display in the Media window.

2 Locate the media file to assign to a Defined button.

3 Drag the media file to one of the Defined buttons (labeled I-4) in the bottom right corner of the Shot Box palette.

4 In the message dialog, click Yes to confirm that the file be assigned to the Shot Box Defined button.

Take Media Files Using the Shot Box Palette

Using the Shot Box, you can quickly output Media Store database files. Media files display on the active output channel. If there are multiple output channels installed on your system, select a program channel button (P1, P2, or P3) on the Shot Box palette to use it to display media files.

To take a media file in real-time with a single click, click one of the Shot Box Defined buttons (labeled I-4). For information on setting up the Shot Box Defined buttons, see "Set Up Media Files for Single-Click Takes" on page 428.

- Click one of the four Defined buttons (labeled I-4) in the bottom right corner of the Shot Box palette. The assigned media file outputs immediately on the active output channel.

Note: The tooltip for a Shot Box Defined button includes the media number of the media file assigned to it.

For files that are not assigned to a Shot Box Defined button, you can take the files using the Shot Box Number field on the Shot Box palette.

1 Using the buttons on the toolbar, display the media to take in the Media window.

2 On the Shot Box palette, click the Store/Play toggle button to read Store. (If the button reads Play, the Shot Box searches for playlists.)

3 On the Shot Box palette, ensure that the LRN (Learn Mode) button is not selected.

4 Select the folio containing the media file to take. The media files display in the Media window.

5 In the Shot Box Number field, enter the file's media number. The media number for a file is displayed below its thumbnail in the Media window. (To quickly set the focus to the Shot Box Number field, press the FI2 key.)

6 To output the file on the active output channel, click the Take button on the Shot Box palette or press the ENTER key on the number pad--not the ENTER key on the main keyboard.

Media Store Preferences

Setting the Media Store preferences allows you to control the Store behavior.

- Display options for the Media window
- Default title and keywords for database media files
- Date format

Feature Note Media Store is a purchase option in TitleOne.

To update the default values, use the Preferences dialog (File > Preferences).

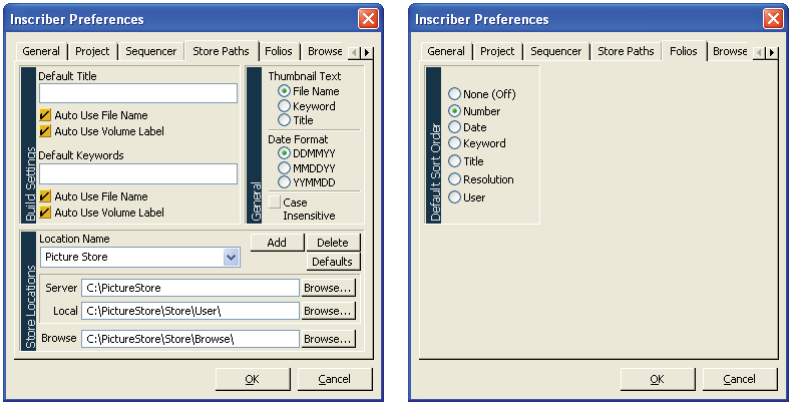


Figure 7-31. Preferences Dialog - Store Paths and Folios Tabs

Change the Thumbnail Text

Below each thumbnail in the Media window, Media Store displays a source icon (see "Media Window" on page 375) and media number followed by one of the following.

- Filename
- First keyword
- Title

By default, Media Store displays the filename. You can change the default so that Media Store displays the first keyword or title assigned to the media file.

1 Open the Preferences dialog (File > Preferences).

2 Switch to the Store Paths tab.

3 In the Thumbnail Text section, select the File Name, Keyword, or Title option.

4 Click OK.

Set the Default Database Media Sort Order

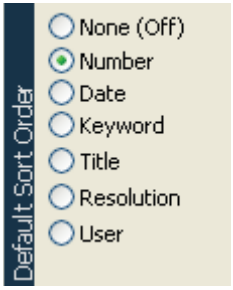
You can change the default order of Media Store database file thumbnails in the Media window. The default sort order is None, which sorts the files by media number.

1 To change the default sort order, open the Preferences dialog (File > Preferences).

2 Switch to the Folios tab.

3 Select a new sort order: None, Number, Date, Keyword, Title, Resolution, or User.

4 Click OK.



For more information on sorting, see "Sort Media Files" on page 407.

Set the Default Title and Keywords

A default title and default keywords are automatically assigned to every media file included in a Media Store database build. You can enter the default title and keywords on the Store Paths tab in the Preferences dialog.

1 Open the Preferences dialog (File > Preferences).

2 Switch to the Store Paths tab.

3 In the Default Title field, enter the default title.

4 In the Default Keywords field, enter the default keywords. Separate entries with a space character. Enter multiple word keywords using quotation marks.

flags international “Canadian flag” patriotism

5 Click OK.

Change the Date Format

Media Store supports three date formats: DD-MM-YYYY, MM-DD-YYYY, and YYYY-MM-DD. The format is controlled by the Date Format option.

Media Store date fields, for example, the file date on the Key Info tab, use the format specified by the Date Format option. Also, if you define a search using the Date search key, you must use the current Media Store date

format.

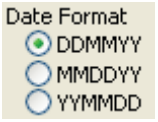
To change the Media Store date format, use the Preferences dialog.

1 Open the Preferences dialog (File > Preferences).

2 Switch to the Store Paths tab.

3 In the Date Format section, select the DDMMYY, MMDDYY, or YYMMDD option.

4 Click OK.



Chapter 8

Paint

Create high-end graphics with the advanced editing tools in Paint.

Introduction to Paint

Feature Note Paint is a purchase option in TitleOne.

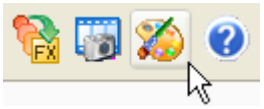
Paint is a full featured image manipulation application that lets you edit, retouch, and add alpha to bitmap images and Paint files. The sophisticated tools in Paint make it easy to clean up logos and images. With a variety of filters, you can create effects quickly and easily. Paint also makes it easy to create textures for use in the CG Editor.

Switch to Paint

You can easily switch between modules using the buttons on the Toolbar or the options from the Tools drop-down menu.

To switch to Paint, use one of the following methods:

- On the Toolbar, click on the Paint button.
- Select Tools > Paint.
- Press F8 on the main keyboard.



Interface Overview

Paint is a full-featured, bitmap-based image manipulation application. It lets you create, edit, retouch, and add alpha to bitmap images. These images can be used as logos, backgrounds, and textures in the CG Editor. You can import files from other applications in many file formats, including 32-bit formats containing alpha. Any image, layout, or frame from, CG, Animation, or Frame Grab can be edited as a bitmap in Paint.

The Paint interface has the following components:

- Paint Workspace
- Attributes Palette
- Tools Palette
- Right-click Menu
- Status Bar
- Scrapbook
- Preview/Program Palette

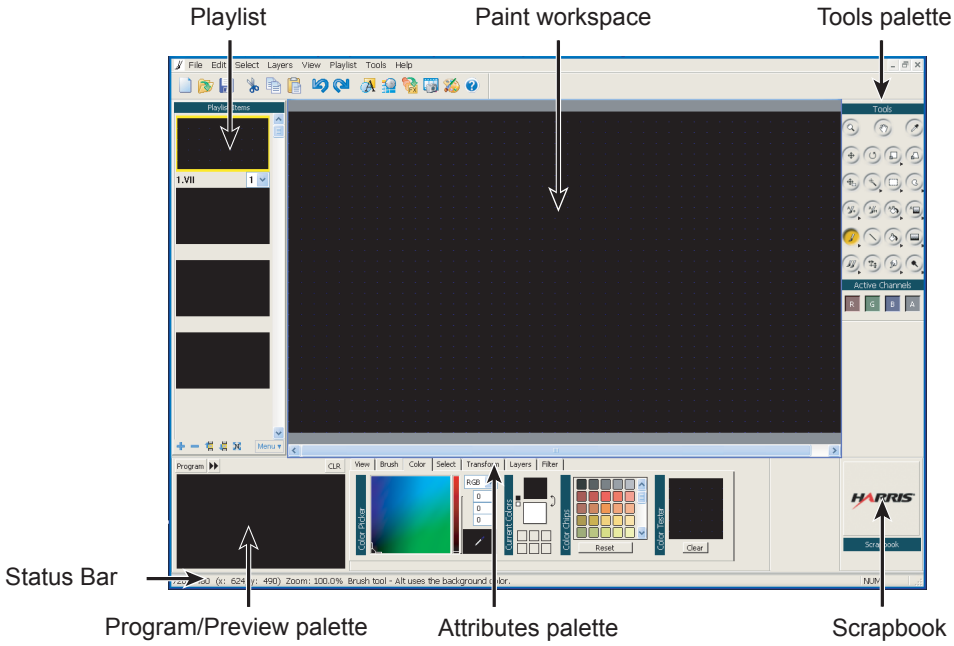


Figure 8-1. Paint Interface

Paint Workspace

The Paint workspace is restricted to the boundaries of the image you are working on. You cannot work outside the image area.

Use the Color tools to paint an image, the Alpha tools to manipulate image alpha, the Selection tools to select the parts of the image to work on, the Transformation tools to transform a selected area, or the Image Editing tools to edit the image. Paint offers a variety of filters and supports Photoshop compatible plug-in filters. Paint also has unlimited layers so you can easily create complex graphics.

Attributes Palette

The Attributes Palette contains tabs for easy access to all of Paint's options, such as View, Brush, Color, Select, Transform, Layers, and Filter. Click on the tab name to display the contents of the tab.

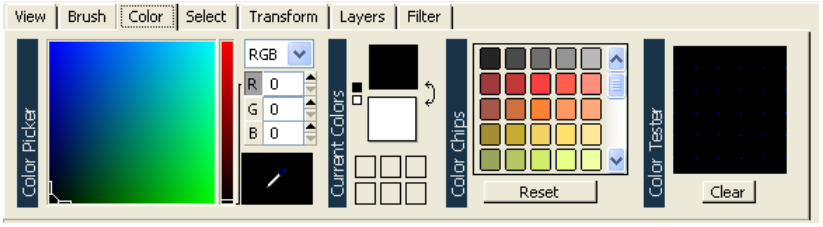


Figure 8-2. Paint Attributes Palette Tabs

The following table describes the functions of the Paint attributes palette tabs.

Table 8-1. Paint Attributes Palette Tabs

Tab	Description
View	Sets the workspace display options such as; Zoom, RGB or Alpha, Grid, Cursor, and Video Safe Title Area.
Brush	Contains all the brush options, including Tool type, Shape, Style, Opacity, Texture, and Brush attributes.
Color	Contains Color Picker options, Foreground and Background colors, a list of the six most recently used colors, Color Chips, and a Color Tester.
Select	Contains the Selection Tools and Options.
Transform	Controls the transformation of your selection such as; Move, Scale, Skew, Rotate, Flip Horizontally, and Flip Vertically.

Table 8-1. Paint Attributes Palette Tabs

Tab	Description
Layers	Contains a thumbnail view of all the layers in your Paint image. You can add, delete, duplicate, rearrange, and merge layers in this tab.
Filter	Contains the filters available to enhance you image such as; Alpha Adjustment, Color Adjustment, and Distortion (including sharpen, blur, and pixelize).

Tools Palette

The Tools palette contains all of the tools available in Paint. The palette includes the General, Transformation, Selection, Alpha, Color, and Image Editing tools. Many tools share one Tools palette button. Multi-tool buttons are indicated by a small triangle on the lower right side of the button. To access the additional tools, click and hold the mouse over the desired tool button. See "Work with Paint Tools" on page 448 for details.

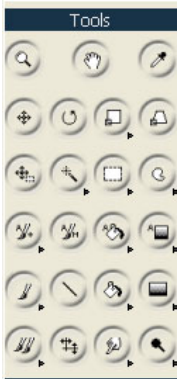


Figure 8-3. Paint Tools Palette

Paint Palette Tools

Table 8-2. Paint Palette Tools

Icon	Name	Icon	Name
General Tools			
	Zoom		Scroll (Pan)
	Color Picker		
Transformation Tools			
	Move		Scale
	Rotate		Skew
	Freeform		
Selection Tools			
	Selection Move		Brush Selection
	Wand		Luminance Wand
	Rectangular Selection		Column Selection
	Elliptical Selection		Scan Line Selection
	Lasso		Linear Lasso

Table 8-2. Paint Palette Tools

Icon	Name	Icon	Name
Color Tools			
	Pencil		Brush
	Airbrush		Eraser
	Fill		Line
	Tolerance Fill		Linear Gradient
	Luminance Fill		Radial Gradient
Alpha Tools			
	Alpha Add		Alpha Luminance Fill
	Alpha Subtract		Alpha Tolerance Fill
	Alpha Memory		Alpha Linear Gradient
	Alpha Fill		Alpha Radial Gradient
Image Editing Tools			
	Clone		Burn
	Clone Fill		Luminance Add

Table 8-2. Paint Palette Tools

Icon	Name	Icon	Name
	Smear		Luminance Subtract
	Blur		Saturation Add
	Offset		Saturation Subtract
	Dodge		Texture

Active Channels

You can select which image channels (red, green, blue, or alpha) you want to work on. When you first launch paint, all channels are selected. See "Work with Channels" on page 495 for details.

Figure 8-4. Active Channels

Status Bar

The status bar displays the image size, cursor coordinates, zoom level, and any modifiers for the current tool. You can view this information on various tabs, but the status bar provides a summary in one easy location.

Figure 8-5. Paint Status Bar

Right-Click Menu

You can access all the Tools by positioning the cursor anywhere on the Paint workspace and pressing the right mouse button.

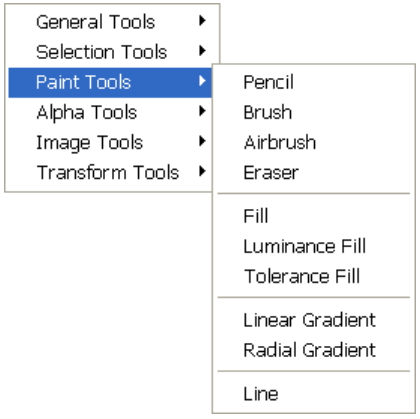


Figure 8-6. Right-Click Menu

Scrapbook

You can use the Scrapbook to move Paint layers or composite images to and from other TitleOne modules without importing or exporting them. This lets you use your images without saving them as separate files, as the images are saved in your .scribelist file instead. However, this method uses a lot more memory. If you transfer an image to the Scrapbook, all layer information is lost.

Program/Preview Palette

The Program/Preview palette allows you to see how events look on the preview channel before sending them to the program channel.

Paint Concepts

Paint provides alpha tools, color tools, image editing tools, selection tools, transformation tools, and filters for fast editing of the images you need to get online.

Clean Up Logos and Add Alpha

If you use logos frequently, cropping and removing image information from around logos or objects may be one of the most important reasons to use Paint. This task is often called logo clean-up. The sophisticated alpha tools in Paint make cleaning up logos easy.

You can add alpha to small areas of your image or make whole areas of your image transparent. These images can then be saved as Inscriber .ipt format files and imported into CG as logos. See "Work with Alpha Tools and Logos" on page 454 for details.

Paint an Image

You can create a series of artistic brush stroke styles and paint an image from scratch using the color tools. See "Paint an Image" on page 463 for details.

Retouch Images

You can retouch images or remove unwanted objects or artifacts, such as telephone poles or scratches, from your images to make them more presentable on air. You can also selectively copy and offset areas using the Clone and Offset tools, and you can edit the luminance values of your image. You can also apply color correction filters to adjust the image color, contrast, or levels. See "Edit an Image" on page 477 for details.

Create Backgrounds and Collages

Backgrounds and collages can be used in a variety of situations. Backgrounds are images used behind CG text. Collages combine and blend multiple images into a single composition. Collages can be used for many purposes, such as backgrounds and over-the-shoulder graphics.

Make Selections

The selection tools make it easy to edit parts of images. To edit a certain area of an image, simply make a selection around the area. You can also import and export selections for later use. See "Modify Selections" on page 469 for details.

Apply Transformations

You can apply transformations to an entire image or to selected areas of an image. Paint has five transformation tools: Move, Scale, Skew, Rotate, and Freeform. See "Work with Channels" on page 495 for details.

Create Textures and Patterns

Textures and patterns can accentuate text and graphics in CG and can also be used as backgrounds. You can use the image editing tools to create seamless textures for use in CG. See "Create Textures" on page 488 for details.

Apply Filters and Create Effects

Paint's image filters let you adjust image color and create a variety of effects. You can clean up frame grabs, colorize black and white photographs, or legalize image colors for display to video.

You can apply filters to an entire image or layer, to selected areas of an image, to imported files, or images transferred into Paint from the Scrapbook. See "Work with Filters" on page 483 for details.

Work with Layers

You can create complex and stunning images with layers. For example, you can use the alpha tools to blend images on different layers together. The number of layers you can use is limited only by your system's resources. See "Work with Layers" on page 493 for details.

Work on Channels

Every layer is made up of four channels: red, green, blue, and alpha. You can paint, retouch, transform, and apply filters to each channel individually. See "Work with Channels" on page 495 for details.

Work with Files

The main thing to remember about working with files in Paint is that Paint files are not saved with the .scribelist file. Paint has its own file format that contains layer information, but when used in other modules, Paint images are only composite images—they do not contain layer information.

Paint File Format

The Paint file format (.ipt) is more than just another bitmap file format. Paint files contain all image layers, opacity settings, and alpha values. The .ipt format also contains the current selection and a bitmap composite of all image layers. If you save your image in any other format (except .lgo), you may lose the alpha channel.

Paint is a single file application. This means you can only have one file open at a time. However, you can use layers as separate files and export visible layers in a bitmap format (.lgo, .tga, etc.).

Create a New Paint File

You can create a new Paint file by selecting Edit > Create New Image. You can specify the image size in pixels and the background color and opacity.

When you create a new image, Paint creates a blank canvas showing 100% alpha. Because there are no color tools, you must either use the Alpha Subtract tool to add opacity, or use the Edit menu to copy another image onto your canvas.

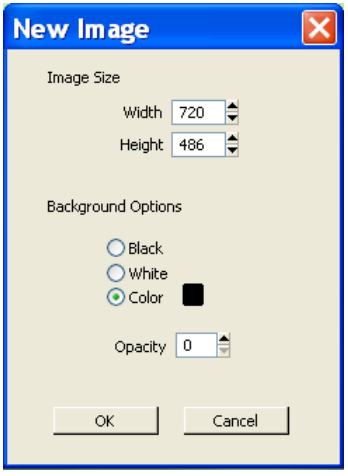


Figure 8-7. New Image Dialog Box

Import or Open a File

To open an existing file or image, select File > Import/Export. To open a playlist, click on the Open button on the toolbar. This option only opens a job file in the playlist; it does not open image files.

Import Options

When you want to work with an existing image, you can transfer it into Paint through the Scrapbook, or import it into the Paint workspace using File > Import/Export. The following table describes all the import options available in Paint.

Table 8-3. Import Options

Options	Description
Import Paint Document...	Imports a Paint (.ipt) file.
Import Image...	Imports any bitmap file.
Import Photoshop File...	Imports a Photoshop (.psd) file.
Import Image Sized to Fit Layer...	Imports a bitmap file sized to fit the current canvas size.
Import Image as Transformation...	Imports a bitmap file as a transformation in the current image. (Once you clear the transformation, you can no longer move it separately)
Import Selection...	Imports a bitmap file as a selection. (once you clear the selection, you can no longer move it separately from the image)
Import Texture...	Imports an image to use as a texture for any brush-based tools.
Import Color Chips...	Imports a palette file (.aco) and overwrites the existing color chips.
Import Color Chips (Append)...	Imports a palette file (.aco) and adds it to the existing color chips.

Import a Texture

You can import a surface texture to be used by the Texture tool or other brush-based tools. Select File > Import/Export > Import Texture. In the Select Channel dialog, you can set the texture size and which image channels you want to use for the texture. Use the Texture field on the Brush tab to set the amount of texture each tool paints with. See "Work with Brush Tools" on page 450 and "Edit an Image" on page 477 for details.

Export or Save a File

When you want to save an image in Paint, you have to export it. If you select the Save button on the toolbar, TitleOne saves the current playlist, not the Paint image. If you save your image as an .ipt or .lgo file, the alpha channel is retained when you use the image elsewhere in TitleOne. If you save your images in any other format, you may lose the alpha channel.

Export Options

The following table describes all of the export options available in Paint.

Table 8-4. Export Options

Options	Description
Export Paint Document	• Exports the current image as an .ipt file. • Saves all alpha and layer information.
Export Image...	• Exports current file as a bitmap image. • Flattens the image into a single layer. • Alpha information may be lost.
Export Current Layer as Image...	• Exports the current layer as a bitmap image. • Alpha information may be lost.
Export Selection...	• Exports selection outline as a bitmap image.
Export Selection Contents...	• Exports selection contents as a bitmap.
Export Color Chips...	• Exports the current color chips as a palette (.aco) file.

Import and Export Selections

Importing and exporting image selections gives you greater control over your work. If you create a selection you know you are going to need later, you can use the File > Import/Export menu options to export the selection and import it again when you need it.

Change Image and Canvas Size

You can change the image or canvas size by selecting Edit > Image and Canvas Size. Resizing the image scales the image, while resizing the canvas crops or adds canvas space without scaling the image.

To resize an image:

1 Enter the new image size (in pixels) in the Width and Height fields.

2 Click on the Resize Image button.

3 Click OK.

To resize the canvas:

1 Enter the new canvas size (in pixels) in the Width and Height fields.

2 Select one of the nine positioning buttons to select where the image will be located on the new canvas. For example, the Top Left button aligns the top left corner of the image with the top left corner of the canvas.

3 Click OK.

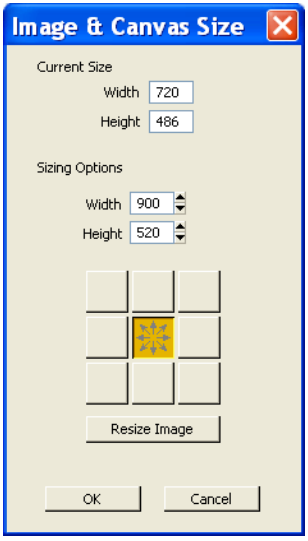


Figure 8-8. Image and Canvas Size Dialog Box

Work with Paint Tools

Paint uses six types of tools: general, transformation, selection, alpha, color, and image editing tools. Most of the alpha, color, and image editing tools are brush-based. That is, they edit the image as if you were using a paint brush on canvas.

Most of the color, image editing, and alpha tools, along with the Brush Selection tool, are all brush-based. These tools act on the image in ways similar to a paint brush, using attribute settings from the Brush tab. Paint has sixteen default brushes, but at any point you can redefine brush shapes and characteristics. See "Work with Brush Tools" on page 450 and "Brush Attributes" on page 451 for details.

Select a Tool

You can select any tool by clicking on a Tools palette button or by using the right-click menu, You can select a brush-based tool (alpha, color, and image editing) from the Tool menu on the Brush tab.

The Attributes palette tabs contain options for various tools.

- The View tab contains options for the Zoom tool.
- The Brush tab contains brush attributes for the color, image editing, and alpha tools.
- The Select tab contains options for the selection tools.
- The Transform tab contains options for the transformation tools.

Tools Palette and Flyout Tools Menu

The Tools palette is displayed in groups of similar tools. Many tool buttons on the palette contain flyout tool menu that reveal additional tools. Buttons with flyout tools are identified by a small black arrow in the bottom right corner of the button. For example, the Brush, Pencil, Airbrush, and Eraser tools share one button. When you click and hold this button, a flyout appears with the tool options. The tool that you select from the flyout is the one that appears on the tool button.

Figure 8-9. Tools Palette Flyout

General Tools

There are three general tools on the Tools palette. They are described in the following table.

Table 8-5. General Tools

Tool	Name	Description
	Zoom	• Zooms the view in or out. • To zoom in, click on the image; to zoom out, hold the ALT key while clicking.
	Scroll (also called Pan)	• Scrolls or pans a zoomed in view. • You can hold the SPACEBAR to quickly switch to and use the Scroll tool while using another tool.
	Color Picker	• Picks the color under the cursor. • Click anywhere in the image to select a color. • The Color tab displays the last six colors chosen with the Color Picker.

Color Pickers

There are two color pickers in Paint: one on the Tools palette, and one on the Color tab. While you can use either tool to select colors, they behave slightly differently.

The Tools palette Color Picker remembers the last six colors selected, and displays them on the Color tab. The Color tab Color Picker does not have memory; it's main use is for quickly selecting a color without having to switch tools. You can use the Color tab Color Picker to select a color from anywhere on your computer monitor. The Tools palette Color Picker tool only selects colors from the Paint workspace. See "Work with Color" on page 458 for details on the Color tab Color Picker.

Work with Brush Tools

The Brush tab contains all the options for working with brushes. There are sixteen default brushes, but at any point, you can redefine the shape and characteristics for any brush.

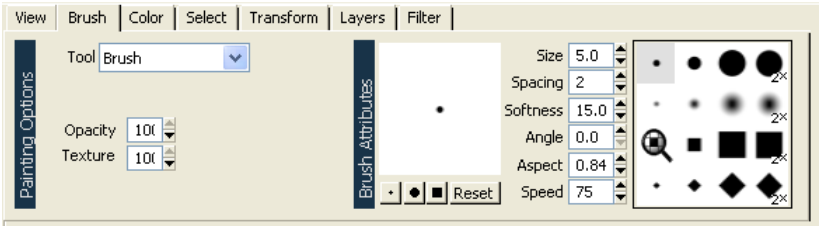


Figure 8-10. Brush Tab

Select a Brush

In the Brush tab, click on the image of the brush type you want to use. There are three brush types: Single Pixel, Elliptical, and Rectangular.

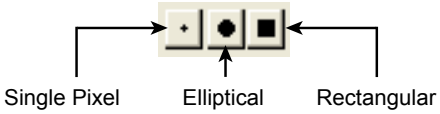


Figure 8-11. Brush Types

Single Pixel Brush

The Single Pixel brushes are one pixel square, but are anti-aliased so they cover an area of at least three pixels. The degree of anti-aliasing depends on the brush style you are using. The hard-edge brush style offers the most precise single-pixel brush.

Elliptical Brush

The Elliptical brushes are the most used brushes in Paint. Elliptical brushes are good general purpose brushes. For a nice soft brush, select an Elliptical brush and change the Softness to 100.

Rectangular Brush

The Rectangular brushes are good for painting large areas. They are also good for creating calligraphic effects and diamond patterns. To create a good calligraphy brush, change the Angle to 320 and the Aspect to 0.25.

Opacity

The Opacity field on the Brush tab sets the opacity for the selected tool. All image editing, color, and alpha tools use the opacity setting. The Brush Selection tool also uses the opacity setting, so you can make selections at less than 100% opacity.

Texture

The Texture field specifies the amount of surface texture applied by the Texture tool and all brush-based tools. Set the value to 0 if you do not want any texture applied when you paint.

You need to import an image to apply it as surface texture every time you create or import a new document. Select File > Import/Export > Import Texture and select the image you want to use as the texture.

All brush-based tools apply the imported texture using the current brush attributes. This includes color for the color tools. Lighter areas of the texture image take on more color or are edited more than darker areas.

See "Edit an Image" on page 477 for details on applying textures with the Texture tool.

Reset the Brushes

You can reset a brush to its default value by clicking on the Reset button. You can reset all the brushes to their defaults by holding the SHIFT key and clicking on the Reset button.

Brush Attributes

Brush characteristics help define and accentuate the behavior of all brush-based tools. You may find that some settings are best for certain tools but need to be modified for others. Brushes have six attributes: Size, Spacing, Softness, Angle, Aspect, and Speed.

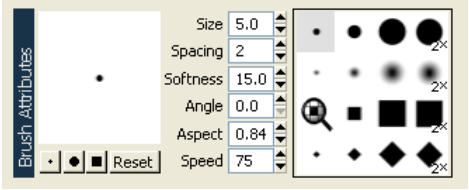


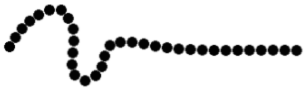
Figure 8-12. Brush Attributes

Size

The Size attribute specifies the overall size of the brush in pixels. The size of the brush affects painting speed. Size is measured in pixels.

Spacing

The Spacing attribute specifies the spacing between brush marks as a percentage of the brush size. You can modify this attribute to create unique strokes.



Softness

The Softness attribute specifies the softness of the brush edges. The larger the value, the greater the softness. A value of 0 means no softness. The Softness value is not used by the hard-edge brush style or Pencil tool.

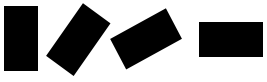
Aspect

The Aspect attribute specifies the width of the brush as a factor of the brush width over brush height. When used in conjunction with the Angle attribute, you can design brushes that create calligraphy effects.

By default, the brush Aspect is corrected for the current video aspect ratio. Circular stokes look circular and square strokes look square in Paint and on video. See "Video Aspect Ratio" on page 491 for details.

Angle

The Angle attribute specifies the counter-clockwise angle of the brush in degrees (0 to 359). Usually you change this attribute after you have changed the brush Aspect.



Speed

The Speed attribute affects the speed at which Paint calculates your brush stroke. This attribute is dependent on the size of the brush. The higher the setting, the more calculations Paint performs. If you want to paint slowly, lower Speed to smooth the stroke.

Brush Preview Window

You can change the selected brush visually in the Brush Preview Window. The Brush window provides a preview of the current brush. The preview shows certain brush attributes: Size, Softness, Angle, and Aspect. You can change the size, angle, and aspect in the Brush window on the Brush tab.

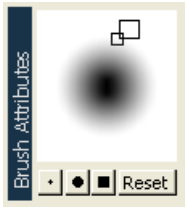


Figure 8-13. Brush Preview Window

Table 8-6. Brush Styles

Cursor	Name	How to...
	Size cursor	Change size—click and drag in the Brush window.
	Angle cursor	Change angle—hold the SHIFT key and drag in the Brush window.
	Aspect cursor	Change Aspect—hold the CTRL key and drag in the Brush window.

Brush Preview Cursor

The Brush Preview cursor lets you see the effects of the current brush settings on the Paint workspace before you make any changes to your image. The cursor shows several brush attributes, including Size, Angle, and Shape.

The brush preview cursor respects selections and layers. It is enabled by default. To disable this option, switch to the View tab and clear the Brush Preview Cursor checkbox.

Work with Alpha Tools and Logos

Removing background information from around logos or objects is one of the primary reasons for using Paint. This task is often referred to as logo clean-up. Effective and efficient logo clean-up calls for proficiency with both the alpha tools and the selection tools. See "Make Selections" on page 465 for details on making selections.

Understand Alpha

The main feature of Paint is its ability to manipulate and paint with alpha. Paint is a full-fledged 32-bit image-editing program that really understands the alpha channel. You can paint, edit, transform, and apply filters to the alpha channel completely independent of the color channels.

Why Add Alpha?

When an image or area of an image is transparent, video shows through. It is often necessary to add alpha so that the video signal shows through only in certain areas. For example, if you are cleaning up team logos for the basketball games aired on your station, you want to be able to paint with alpha to clean up edges on the logos.

Alpha Tools

Paint provides eight alpha tools: Alpha Add, Alpha Subtract, Alpha Memory, Alpha Fill, Alpha Tolerance Fill, Alpha Luminance Fill, Alpha Linear Gradient, and Alpha Radial Gradient. The alpha tools have two special characteristics: they manipulate only the alpha channel, and they remember what the alpha values were before you manipulated the image alpha.

For example, if you import an image and paint it with the Alpha Add tool, it may appear as though you are erasing the image. If you paint over the newly created transparent areas with the Alpha Memory brush, the alpha values in the image are restored to their original values. It is important to remember that if you use the Eraser tool instead of the Alpha Add tool to add transparency, the Alpha Memory brush cannot restore the alpha values.

Table 8-7. Alpha Tools

Tool	Name	Description
	Alpha Add*	• Paints with alpha—adds transparency.
	Alpha Subtract*	• Removes alpha—adds opacity.
	Alpha Memory*	• Restores alpha to its original levels.
	Alpha Fill	• Fills the image or selection with alpha.
	Alpha Luminance Fill	• Fills all pixels adjacent to the selected pixel with alpha based on luminance values of the image. • The Tolerance value specifies the range of luminance values for pixels to be filled in.
	Alpha Tolerance Fill	• Fills all pixels adjacent to the selected pixel with alpha based on tolerance (hue) values of the image. • The Tolerance value specifies the range of hues for pixels to be filled in.
	Alpha Linear Gradient	• Performs a linear gradient on the alpha channel. • Image appears to fade to video.
	Alpha Radial Gradient	• Performs a radial gradient on the alpha channel. • Image appears to fade to video.

*These tools are brush-based.

Alpha Gradients

Alpha gradients make creating layer effects easy. Use the alpha gradient tools when you want your image to have layers fading into each other,

Restore Alpha

Memory is a characteristic specific to the alpha tools. No matter what alpha tool you use to manipulate the alpha channel, the Alpha Memory tool can restore it.

Vector-Based Logos

Some logos are stored in vector-based file formats, such as .eps or Illustrator® files. Paint cannot use vector-based files, so you need to convert these files to raster-based images, such as .bmp or .jpg. Programs like Illustrator and Photoshop are capable of making these conversions.

Scale and Resize Logos

Most of the time, you will need to resize your logos to get them to the size you need for video output. You will get better results if you start with a large image (720 NTSC or PAL) and scale it down later. If you are scanning a logo, scan it in at 200% to 400% of the image size to give yourself more detail to work with. Scale your logo to the size you need when you finish editing it, or when you import it into CG.

Use Paint Images in CG

Once you've cleaned up your logo, you can export it from Paint and add it to the Logo Map in CG to use it as a text or graphic object. See "Logo Objects" on page 137 for details on using logos in CG.

You can also import images from Paint to use as backgrounds or textures for text and graphic objects.

The Paint Image

In Paint, you can only work on a single image at a time, but each image can have multiple layers. Each layer has four channels: Red, Green, Blue, and Alpha.

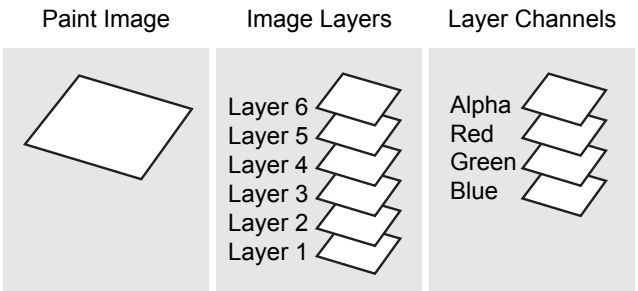


Figure 8-14. Image Layers and Channels

Image Channels

The color channels define the color portion of the layer while the alpha channel defines the visible portion of the layer. You can edit the channels individually and view the alpha channel separately from the color channels. In Paint, the alpha channel is represented by a grayscale image. Fully opaque areas are white, and fully transparent areas are black.

See "Work with Channels" on page 495 for details on manipulating individual channels and "View Your Image" on page 490 for details on viewing the alpha channel.

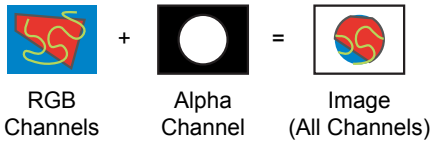


Figure 8-15. Image Channels

Alpha Channel in Paint

In Paint, the alpha channel is actually made up of two channels: the Real alpha channel and the Displayed alpha channel. The alpha tools work on the displayed alpha channel while all other tools work on the real alpha channel.

The displayed alpha channel is unique to Paint, and acts like a mask on the real alpha channel; which is the original alpha channel of the image. The real alpha channel is affected by all of the other Paint tools.

You need to understand this because the alpha tools remember the previous values by looking at the real alpha channel. The Alpha Memory tool cannot restore alpha when you use the image editing, color, or transform tools because they affect the real alpha channel — the same channel the Alpha Memory tool uses as its memory.

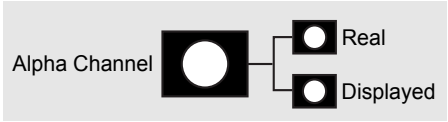


Figure 8-16. Alpha Channels

Work with Color

In Paint, there are several different ways of finding the color you want. The Color tab offers the standard Inscriber Color Picker options, Foreground and Background colors, a list of the six most recently used colors, Color Chips, and a Color Tester. You can also use the Color Picker tool on the Tools palette to select colors.

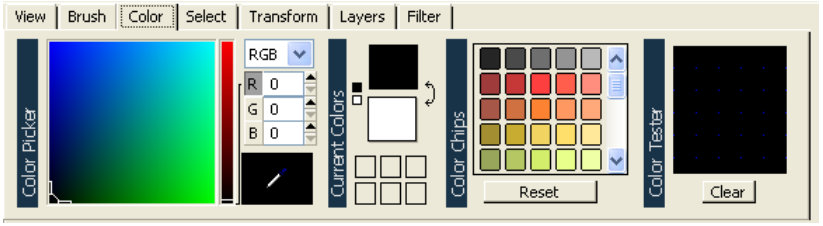


Figure 8-17. Color Tab

Color Picker Area

The Color Picker area on the Color tab offers a second Color Picker tool, in addition to the one on the Tools palette. The Color tab Color Picker lets you quickly pick a color from anywhere on your computer monitor without having to switch tools.

To use it the Color tab Color Picker, click on the Color Picker tool and drag it to the color you want to select. When you release the left mouse button, the color under the cursor will be selected.

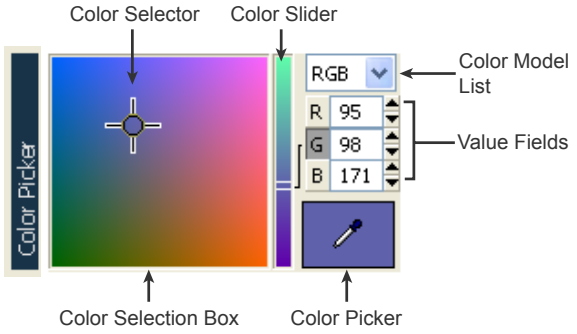


Figure 8-18. Color Picker Area

The Color Picker area on the Color tab supports three color models: RGB, HSV, and HLS. In all three color models, color definitions are the result of

three values. When you modify one value, the range of possible colors that can be achieved using the other two values changes, so the color display changes. Use the Color Selector and the Color Slider to get close to the color definition that you want and then change the three values numerically until you reach the specific color.

Table 8-8. Color Models

Color Model	Description
HSV	Hue, Saturation, and Value. This model describes colors in terms of hue (tint), saturation (tone), and value (shade).
RGB	Red, Green, and Blue. This model is an additive model where the amount of red, green, and blue are added together to determine the final color.
HLS	Hue, Lightness, and Saturation. Unlike HSV, the HLS color model represents saturation and lightness as independent values.

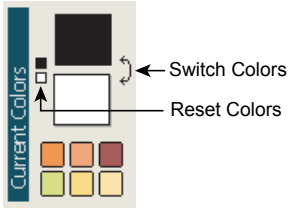
Foreground and Background Colors

You can specify both a foreground and a background color at the same time. Most color tools use only the foreground color, but the Linear Gradient tool, Radial Gradient tool, and certain filters also use the Background color.

You can quickly switch any color tool to the Background color by holding the ALT key. With gradient tools, holding the ALT key switches the direction of the gradient. This shortcut works for the color tools and alpha gradient tools.

Set the Foreground and Background Colors

The default Foreground color is black, and the default Background color is white. You can reset the Foreground and Background to the defaults at any time by clicking on the Reset Colors button.



When you use the Color tab or Tools palette Color Picker tools, the color you select

becomes the Foreground color. You can use the Color Picker tools to select the Background color instead by switching the Foreground and Background colors. To do this, click on the Switch Colors arrow.

You can also set the Foreground and Background colors by clicking on the Foreground or Background color swatch and selecting a color from any of the Color tab color selection areas.

Switch Colors

You can switch the Foreground and Background colors by clicking on the Switch Colors arrows. You can also temporarily switch colors on certain tools by holding the ALT key while you paint.

Most Recent Colors

Paint displays the six most recently selected colors. This is a handy feature when you need to use several colors repeatedly.

Color Chips

Color chips are handy for defining colors for specific projects, such as working within station logos. You can define, replace, delete, select, import, export, and reset the color chips. See "Use Color Chips" on page 461 for details.

Color Tester

The color tester can be used to generate colors that complement each other. It can also be used as a cloning source or destination, giving added flexibility when using the Clone tools.

You can use all tools in the color tester, but there are a few restrictions. The undo commands, filters, selection actions, and selection options do not work. To deselect in the color tester, you need to select the Rectangular Selection tool and click without dragging.

Color Correction Filters

Although there are no color correction options on the Color tab, there are color correction filters in Paint. See "Work with Filters" on page 483 for details.

Use Color Chips

Whenever you need to use a particular color more than once, create a color chip. Color chips can be valuable when you do not have time to find the right color or you remember using a particular color on a previous project but no longer have the files on your computer. If you have defined your colors ahead of time, these colors can provide a frame work for creation.

Palette Files

Palette files (.aco) are the files containing the color chips. Paint comes with three sets of color chips: the default, subtle, and funky palette files. The files are located in the Paint/Palettes folder. You can create your palettes in Paint or import palettes created in Photoshop.

If you want to import palette files from Photoshop, the palettes must be created in RGB color mode. Photoshop palettes can specify colors in any color model, but Paint can only accurately read RGB colors. If the colors are specified in another color model, Paint replaces the colors with gray.

You can also use Paint palette files in Photoshop.

Import Color Chips

There are two import options for importing palette files. You can overwrite the existing list or you can add the new chips to the existing list. To overwrite the existing list, select File > Import/Export > Import Color Chips. To add the new chips to the existing list, select File > Import/Export > Import Color Chips (Append). Paint will remember what chips are imported from session to session.

Export Color Chips

You can export all color chips by selecting File > Import/Export > Export Color Chips.

Reset to Defaults

You can reset the color chips to the defaults by clicking on the Reset button. You do not have to worry about changing or deleting the default palette file (default.aco), since the defaults are built into Paint.

Use Color Chips with CG

Paint comes with two images containing colors from the palette files. You can use these files in CG to select the same colors in both CG and Paint. These files are color_default&subtle.tga and color_funky.tga in the Paint\Palettes folder.

To use these colors in CG, import the palette file as a logo using the Logo tab. Create a logo and select the palette file image as the logo. Define Style

Chips using the desired palette colors, and delete the logo when you are done with it. Save the layout as a template in the Templates Registry.

Use the Color Chip Cursors

You can select, add, replace, and delete color chips from the list. The cursor changes to show you what action you are performing. The following table describes how to perform each action.

Table 8-9. Color Chip Cursors

Cursor	Name	How to...
	Select cursor	• Select a color—click the desired color chip.
	Add cursor	• Add a color—hold the SHIFT key and click in the last row in the color chip list. • Replace an existing color—hold the SHIFT key and click on the color chip.
	Remove cursor	• Remove a color chip—hold the CTRL key and click on the color chip.

Paint an Image

All Color tools are available from either the Tools palette, the Tool drop-down list on the Brush tab, or the right-click menu. The Tools palette allows you to quickly change the tools you are using while the Brush tab allows you to set specific tool attributes. Tool specific options are always displayed on the Brush tab.

Color Tools

There are ten color tools in Paint. The following table lists the tools and their functions.

Table 8-10. Color Tools

Tool	Name	Description
	Pencil	• Paints hard-edged brush strokes. • Brush tab softness setting is ignored.
	Brush	• Paints soft-edged brush strokes.
	Airbrush	• Paints soft-edged brush strokes . • Builds up opacity beyond the opacity setting.
	Eraser	• Adds alpha to the real alpha channel. • Eraser brush strokes cannot be restored with the Alpha Memory brush.
	Fill	• Fills the layer selection with the selected color.
	Tolerance Fill	• Fills all pixels adjacent to the selected pixel with color based on tolerance (hue) values of the image. • The Tolerance value specifies the range of hues for pixels to be filled in.
	Luminance Fill	• Fills all pixels adjacent to the selected pixel with color based on luminance values in the image. • The Tolerance field specifies the range of luminance for pixels to be filled in.

Table 8-10. Color Tools

Tool	Name	Description
	Linear Gradient	• Fills the selection with a linear gradient using foreground and background colors.
	Radial Gradient	• Fills the selection with a radial gradient using foreground and background colors.
	Line	• Draws a line. • Line width is specified in the Width field.

Use the Background Color

The gradient tools are the only tools that use both the Foreground and Background colors. All other tools use only the Foreground color. You can temporarily switch these tools to the Background color by holding the ALT key while you paint. Holding the ALT key when you apply the gradient tools reverses the gradient direction.

Make Selections

In Paint, you can edit an entire layer at once, or you can specify which areas of the layer you wish to work on. To work only on a particular area of an layer, you must first select it. Once you have made a selection, you can import, export, modify, and move the selection outline, or you can modify, transform, and apply filters to the selection contents.

Select Tab

You can make complex selections using the Add, Subtract, and Intersect Selection options on the Select tab. You can invert a selection, add or remove edge pixels, change the degree to which pixels are selected, or select only the pixels around the edge of the selection. See "Modify Selections" on page 469 for details on modifying your selections.

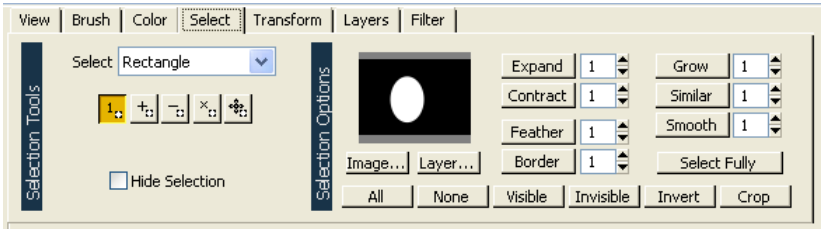


Figure 8-19. Select Tab

Selection Tools

Paint has ten Selection tools, all located on the Tools palette. The Selection tools offer a variety of ways of making selections. You can make a simple selection with only one tool, or you can refine and create complex selections by using a variety of tools and options. See "Modify Selections" on page 469 for details on creating complex selections.

Each selection tool creates a differently shaped selection. The tools are described in Table 8-II. Selection Tools.

Table 8-11. Selection Tools

Tool	Name	Description
	Selection Move	• Moves the current selection outline.
	Wand	• Selects areas of similar color. • The Wand Tolerance field on the Select tab specifies how similar colors have to be to for inclusion in the selection.
	Luminance Wand	• Selects areas of similar luminance. • The Wand Tolerance field on the Select tab specifies how similar the values have to be for inclusion in the selection.
	Brush Selection	• Selects areas using the current brush attributes, painting a selection. • Lets you select pixels less than 100%.
	Rectangular Selection	• Selects a rectangular area.
	Elliptical Selection	• Selects an elliptical area.
	Scan Line Selection	• Selects an entire scan line.
	Column Selection	• Selects a column one pixel wide.
	Lasso	• Lets you draw a freehand selection.
	Linear Lasso	• Lets you select an area as a free-form polygon. • You draw a series of connected lines, then double-click or hold the CTRL key and click to close the selection.

Selection vs. Contents

Each selection has two parts: the selection outline and the selection contents. The selection tools and the options on the Select tab affect the selection outline. The filters, color, alpha, transformation, and image editing tools modify the contents.

Selection Marquee

The selection area is outlined by a flashing dotted line called the selection marquee. The selection marquee only shows you which pixels are selected; as long as a pixel is at least 1% selected, it appears within the selection marquee.

You can hide the marquee by selecting the Hide Selection checkbox on the Select tab. The marquee disappears, but the pixels remain selected.

Selection Channel

The Selection Channel thumbnail on the Select tab shows the degree to which individual pixels are selected. Black represents areas that are 0% selected, white presents areas that are 100% selected, and shades of gray show areas that are only partially selected. Seeing these differences is very helpful when you are using the Brush Selection tool to select pixels at less than 100% opacity.

The Selection Channel thumbnail helps you keep track of how changes will be applied to your selection. Pixels that are 100% selected will be affected differently than pixels that are 50% selected when you edit them.

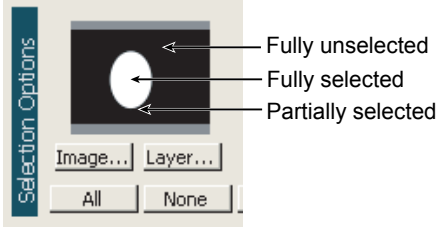


Figure 8-20. Selection Channel

Opacity and Level of Selection

Pixels can be selected at a range of values from 1% to 100%. The level of selection of the pixels determines the degree to which changes are applied when you edit the selection. For example, if you select an area at 50%, then apply a filter, the filter is applied to the selection at 50% opacity.

Only the Brush Selection tool selects pixels at less than 100% opacity. Like all brush-based tools, you set the opacity level for this tool in the Opacity

field on the Brush tab. When you make your selection, the Selection Channel shows the varying levels of selection of the pixels as a grayscale image.

Import and Export Selections

You can import and export selections to give you greater control over your work. To export a selection outline, select File > Import/Export > Export Selection. You can export the selection in a variety of file formats.

To import a selection, select File > Import/Export > Import Selection. This imports the selection or image outline, not the selection or image contents.

Import and Export Selection Contents

To export the selection contents, select File > Import/Export > Export Selection Contents. When you export the selection contents, Paint crops the image to the selection and alphas out all unselected pixels. Make sure you save the image as an .ipt format to maintain the alpha channel. If you do not, the area around the selection appears black instead of transparent when you import the selection.

To import the selection contents, select File > Import/Export > Import Image as Transformation. If you select File > Import/Export > Import Selection, you will import only the selection outline.

Modify Selections

Selections can be powerful tools, and you can create, modify, and use them in numerous ways with the options on the Select tab.

Creation Options

When making a selection, you can specify whether you want to make a single selection, add to an existing selection, subtract from an existing selection, or intersect a new selection with an existing selection. You can also specify that you only want to move the current selection. These options are available in the Selection Tools section of the Select tab.

Table 8-12. Creation Option Buttons

Button	Name	Description
	Single Selection	• Creates a new selection every time you draw a selection.
	Add to Selection	• Adds a selection to the current selection. • Has the same effect as using the SHIFT key with the Single Selection button selected.
	Subtract from Selection	• Subtracts new selections from the current selection. • Has the same effect as using the ALT key with the Single Selection button selected.
	Intersect Selection	• Intersects any new selections with the current selection so that only areas common to both selections remain selected. • Has the same effect as using the SHIFT and ALT keys with the Single Selection button selected.
	Move Selection	• Moves the current selection.

Selection Buttons

The selection buttons on the Select tab affect the current selection.

Table 8-13. Selection Buttons

Button	Description
Image...	• Opens the Select Channel dialog in order to select a channel on all layers.
Layer...	• Opens the Select Channel dialog in order to select a channel on the current layer.
All	• Selects all the pixels in the current layer.
None	• Clears all selected pixels and ends a transformation.
Visible	• Selects all visible pixels in the layer (all pixels that at least 1% opaque).
Invisible	• Selects all invisible pixels in the layer (all pixels that are 100% transparent).
Invert	• Inverts the current selection.
Crop	• Crops the image to the current selection.
Select Fully	• Selects all pixels in the selection at 100%.

Selection Fields

To use the selection fields, enter a specific value in the appropriate field and click on the corresponding button to apply the change. All values are in pixels.

Table 8-14. Selection Fields

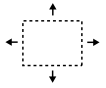
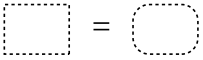
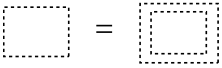
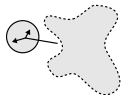
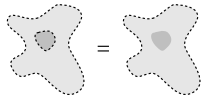
Option	Illustration	Description
Expand		• Enlarges the selection outward.
Contract		• Shrinks the selection inward.
Feather		• Feathers or softens the selection by selecting pixels at lesser levels.
Border		• Creates a border around the selection.

Table 8-14. Selection Fields

Option	Illustration	Description
Grow		• Swells the selection based on the tolerance value. • Extends the selection based on the pixel values of its neighbors.
Similar		• Selects regions similar to the current selection based on the tolerance value.
Smooth		• Includes or excludes pixels in the selection based on whether the majority of nearby pixels are selected.

Work with Transformation Tools

The Transform tab and the transformation tools on the Tools palette control all the transformation options, allowing you to move, scale, rotate, and otherwise modify your selections. You can also use these tools to add shadows.

Selections and Transformations

Selections define the areas to be transformed. If you haven not made a selection, the entire layer is transformed when you use a transformation tool or apply a transform option.

Transform Tab vs. Transformation Tools

Many of the options on the Transform tab act like transformation tools, but are not true tools. The values on the tab mimic the transformation tools as closely as possible, but may not always produce the expected results. The Transform tab also includes several transformation options that are not accessible through the transformation tools.

Transformation Tools

The five transformation tools, available on the Tools palette, are described below. You can also alter the move, scale, skew, and rotate values from the Transform tab.

Table 8-15. Transformation Tools

Tool	Name	Description
	Move	• Moves the selection.
	Scale	• Scales the selection.
	Skew	• Skews the selection.
	Freeform	• Transforms individual points of the selection.
	Rotate	• Rotates the selection.

Import Images as Transformations

You can import an image as a transformation into the current Paint document. This is the method the Scrapbook uses to place images in Paint. To import an image as a transformation, select File > Import/Export > Import Transformation, and navigate to your image location.

Transformation Modifiers

There are two modifier keys you can use when you apply transformations with the transformation tools. Hold the ALT key to paste a copy of the selection contents while you are transforming. Hold the CTRL key to paste a copy when the mouse button is pressed.

Exit Transformations

You can use several methods to exit a transformation:

Table 8-16. Exit Transformations

Method	Outcome
SHIFT+ESC	• Exits the transformation without applying it.
ESC	• Applies and exits the transformation.
	• Applies and exits the transformation. • This button is located on the Select tab.
Select a new tool	• Applies and exits the transformation.

Use the Transform Tab

The Transform Tab provides options for more precise control over your transformations. You can adjust the opacity, flip your selections and add depth, and select relative or absolute transformations.

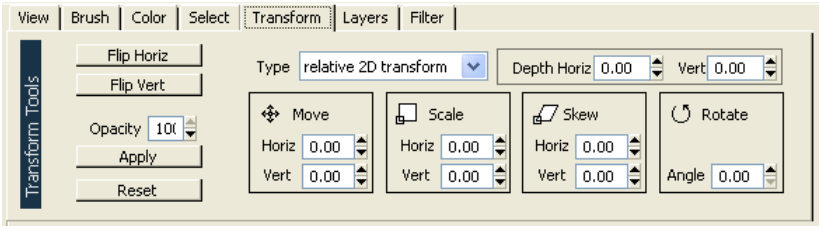


Figure 8-21. Transform Tab

Transformation Type

You can modify your transformations based on three frames of reference: Relative 2D Transform, Relative Corner Offsets, and Absolute Corner Position. Select your frame of reference from the Type drop-down list on the Transform tab. The main difference between the frames of reference is in the way Paint measures the movement across the workspace.

Relative 2D Transform

This frame of reference finds the center point of your transformation and sets its initial position as the origin, with video coordinates (0, 0). Any changes to the position of your transformation are measured in relation to this point.

This frame of reference moves, scales, skews, and rotates your selections in the same way as the Transformation tools. Note that when you use the Skew, Scale, or Rotate fields on the Transform tab, the center point of your transformation does not change. Only the Move fields change the position of the center point.

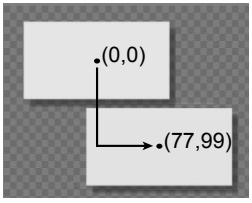


Figure 8-22. Relative 2D Transformation

Relative or Absolute Corners

With the Relative Corner Offsets and Absolute Corner Position frames of reference, you can use the transform tools to make the same basic transformations as with Relative 2D Transform. You can also skew the transformation corners in unique ways with the Top Left, Bottom Left, Top Right, and Bottom Right fields on the Transform tab.

The result of the transformation is the same whether you use the Relative Corner Offsets or Absolute Corner Position frame of reference; the difference is in the way the origins are set.

Absolute Corner Offsets sets the top left corner of the Paint workspace as the origin. When you move a transformation to a specific location, its final coordinates are always the same, no matter what the initial position is. Since each corner occupies a different position, each corner has different video coordinates.

Relative Corner Offsets sets four origins, one at each initial corner position for the transformation. When you move the transformation, the final coordinates are based on each corner's initial position. If you move your transformation without skewing it, each corner has the same final coordinates, since each corner has moved an equal distance from its initial location.

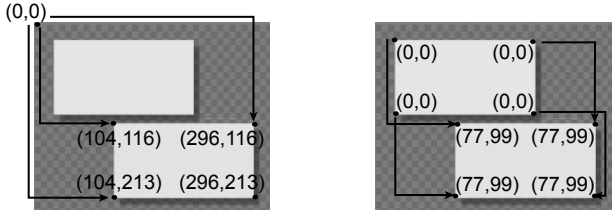


Figure 8-23. Absolute and Relative Transformation

When you adjust a corner with the fields on the Transform tab, only the selected corner of your transformation is moved. With Relative Corner Offsets, the new corner position is measured from its initial position. With Absolute Corner Position, the new position is measured from the top left corner of the workspace.

Flip Horizontally and Vertically

The Flip Horiz button flips your image horizontally, around the vertical *y*-axis. The Flip Vert button flips your image vertically, around the horizontal *x*-axis.

Add Depth

The horizontal and vertical depth fields allow you to add depth or perspective to your transformations. Depth Horiz skews transformations left to right, so they recede into the background. Depth Vert skews transformations top to bottom, so they recede upward or downward.

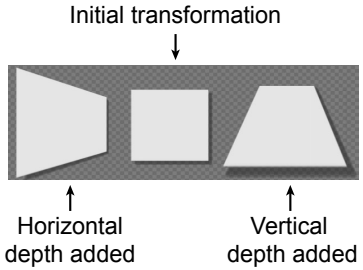


Figure 8-24. Horizontal and Vertical Transformation

Transformation Opacity

You can change the opacity of your transformations with the Opacity field on the Transform tab. This allows you to superimpose transformations as ghost images, or have deeper layers show through certain areas of the current layer.

Edit an Image

Paint offers several tools that you can use to edit and retouch your images. With the image editing tools, you can remove unwanted objects or artifacts, copy and offset areas, and adjust the luminance.

Image Editing Tools

Paint has twelve image editing tools. All tools except the Clone Fill and Offset tools are brush-based. That is, they use the attributes set on the Brush tab.

Table 8-17. Image Editing Tools

Tool	Name	Description
	Clone	• Paints with image data. • You can set the clone source and clone destination, or copy the image data to use as the clone source.
	Clone Fill	• Fills with image data. • You can set the clone source and clone destination.
	Smear	• Smears the image.
	Blur	• Blurs the image.
	Offset	• Offsets the image and wraps the edges.
	Dodge	• Lightens the image by moving the color values for the pixels up to their maximum; for example, RGB (255,72,0) will dodge to (255, 255, 0).
	Burn	• Darkens the image by moving color values for the pixels to their minimum; for example, RGB (255, 72, 0) will burn to (255, 0, 0).

Table 8-17. Image Editing Tools

Tool	Name	Description
	Luminance Add	• Lightens the image by adding luminance in HLS color space; all colors start to move towards white.
	Luminance Subtract	• Darkens the image by subtracting luminance in HLS color space; all colors start to move towards black.
	Saturation Add	• Adds chroma to the image by adding saturation in HLS color space. • If the image is monochrome, Saturation Add acts like a tint tool using the foreground color to tint.
	Saturation Subtract	• Subtracts chroma from the image by removing saturation in HLS color space; all colors move towards gray.
	Texture	• Adds texture using the image colors. • Lightens or darkens the image based on light and dark areas in the texture.

Smear Settings

The Smear tool is sensitive to the speed of your stroke. The slower you move the tool across the image, the more the colors will smear. In the following image, the Smear tool was moved quickly across the color boundary in the top smear, and slowly across the color boundary in the bottom smear. The dark color was carried much further into the light color in the slower smear.

Figure 8-25. Smear Tool Effect

Adding Texture

The Texture tool applies the imported texture to the current layer using the layer colors. Darker areas of the texture image take on more color than lighter areas. For example, if you have a picture of a yellow flower with green leaves and you apply a texture with the Texture tool, the texture appears green when applied to the leaves, and yellow when applied to the flower.

To add a surface texture to your image, import an image to use as a texture. Select File > Import/Export > Import Texture and select an image. Use the Texture and Opacity settings on the Brush tab to set how the texture is applied.

You can also apply surface textures with other brush-based tools. See "Work with Brush Tools" on page 450 for details.

Work with Clone Tools

The Clone and Clone Fill tools let you paint an exact duplicate of a layer or image into the current layer. As a brush-based tool, the Clone tool paints with the settings on the Brush tab. With the Clone Fill tool, you can fill entire sections with image data with a single click.

Defining a Source Point

Before you can begin cloning, you need to define a source point. The source point is the location Paint copies from when you start painting with the Clone or Clone Fill tools. With the Clone tool selected, position the cursor over the part of the layer you want to use as the source, hold the ALT key, and click the left mouse button. The cursor shape changes to show you that the source point is being set. When you begin painting, the source point is identified by a set of crosshairs.

Figure 8-26. Clone an Image

Once you have defined a source point, you can paint anywhere in the current layer. Wherever you click in the layer, the Clone tool copies the source point. If you drag the Clone tool around, the source point moves to match your cursor movement. However, each time you release the mouse button and click again, the Clone tool returns to the originally defined source point. This means you can make several copies of the source point at different locations throughout the layer.

You do not have to clone the same layer or image the source point was set from. You can select another layer, close the current image and import a new one, or work on a blank canvas. Paint remembers the image data from the previously defined source point.

Use the SHIFT Key

The SHIFT key changes how the clone source is set, depending on whether there is an active selection in the layer.

If you press ALT+SHIFT+click to set the source point when there is no selection, Paint copies the entire layer and uses the copy as the clone source. This allows you to paint over the source point without losing the original clone source data.

When there is an active selection and you press ALT+SHIFT+click instead of ALT+click to define the source point, Paint takes a copy of the selection contents and uses that as the source image. For example, if you have a picture of a face and a selection around one eye, pressing SHIFT+ALT+click sets just the selected eye as the clone source. As you paint, only the eye is cloned. Remember to clear the selected area before you begin cloning.

Use the CTRL Key and Align Checkbox

The CTRL key and Align checkbox on the Brush tab change how the clone destination is set. Enabling the Align option prevents a new destination point from being set each time you begin painting with the Clone tool, allowing you to stop and resume painting while creating a seamless clone. If the Align option is not enabled, pressing the CTRL key as you begin cloning has the same effect.

For example, if you are cloning an eye, but realize your brush is too big, you can stop painting and resize your brush. Then, as you begin to paint with the Clone tool again, hold CTRL to continue the clone where you left off.

If Align is selected, holding CTRL temporarily disables the Align option. This lets you set a new destination point for your clone without having to clear the Align checkbox.

Tile Checkbox

The Tile checkbox forces Paint to tile the clone source information throughout the layer. For example, if you have selected a beetle and set it as your clone source, cloning with the Tile option enabled clones the beetle over and over again as you drag the Clone tool throughout the layer. If you are using an entire image or layer as your clone source, Paint tiles the image whenever the source point reaches the image edge.

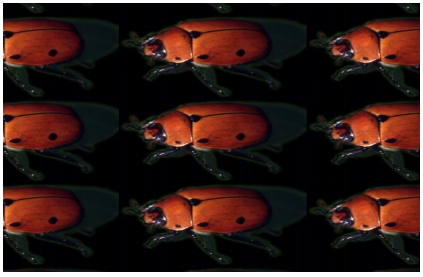


Figure 8-27. Clone Tile Checkbox

Clone Fill Tool

The Clone Fill tool lets you copy entire sections of a layer with one click. When you set the clone source, the Clone Fill tool copies the entire layer or selection, and pastes the source onto the current layer.

For example, if you have an active selection and you use ALT+click to set the clone source, the Clone Fill tool fills the selection with a copy of the entire image, sized to fit.

The CTRL and SHIFT modifier keys and the Tile and Align checkboxes work the same way for the Clone Fill tool as for the Clone tool. For example, you select an eye and set the selection as the source point using ALT+SHIFT+click. When you click in the layer with the Clone Fill tool, the layer is filled with a sized-to-fit copy of the eye. If the Tile option on the Brush tab is enabled, the Clone Fill tool tiles the eye throughout the image.

Work with Filters

Inscriber filters extend the functionality of Paint. All filters appear in the Plug-In Filters list on the Filter tab. Paint also supports third-party Photoshop plug-in filters, so many of the filters you use in Photoshop can also be used in Paint. See "Third-Party Filters" on page 486 for details on using third-party filters.

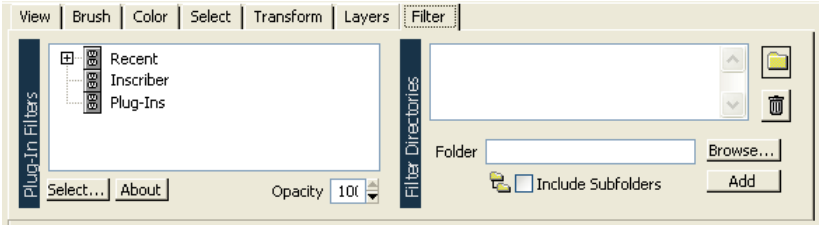


Figure 8-28. Filter Tab

Inscriber Filters

There are 34 filters that come with Paint The filters are divided into groups according to their function.,

Table 8-18. Paint Filters

Filter Type	Plugin	Function
Alpha Adjustment	• Invert Key	• Operate solely on the alpha channel.
Legalize	• Complex NTCS Legalize • Complex PAL Legalize • Mark NTSC Illegal Colors • Mark PAL Illegal Colors • Simple NTCS Legalize • Simple PAL Legalize	• Identify and corrects illegal colors for display to video.

Table 8-18. Paint Filters

Filter Type	Plugin	Function
Color Adjustment	• Brightness & Contrast • Color Balance • Invert Color • Level Curves • Levels • Monochrome • Posterize • Threshold	• Operate solely on the color channel to adjust contrast or color levels.
Distortion	• Color Emboss • Emboss • Gaussian Blur • Motion Blur • Pixelize • Radial Blur • Sharpen	• Distort the image in a variety of ways to create special effects.
Video Cleanup	• Adaptive Field I • Adaptive Field 2 • Average Field I • Average Field 2 • Chroma Antialiasing • Horizontal Risetime • Interpolate Field I • Interpolate Field 2 • Reduce Flicker • Remove Flicker • Repeat Field I • Repeat Field 2	• Removes interlaced fields and corrects for flicker and luminance changes in images grabbed from video.

When you first switch to the Filter tab, the filters list is collapsed, and only the filter types are listed. To expand the view to individual filters, click on the + symbol next to each filter type.

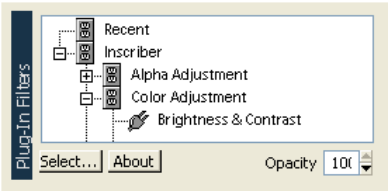


Figure 8-29. Filters List

Recent Filters List

The Filters list contains three main headings: Inscriber, Plug-ins, and Recent. While all of the available filters are listed under Inscriber and Plug-ins, Recent contains a list of the last ten filters used. This gives you quick access to your most frequently used filters without having to navigate through the Inscriber list.

Apply Filters

To apply a filter, select it from the Filters list and either double-click on the filter name or click on the Select button. Some filters bring up a dialog with filter options and a thumbnail preview of the filtered image.

Apply Filters to Selections

You cannot apply filters to selections, but you can create a new layer from a selection and apply the filter to the new layer. See the procedure "Work with Layers" on page 493 for details.

Filter Opacity

Before applying a filter, you can set the filter opacity in the Opacity field on the Filter tab. This lets you create more subtle effects than applying a filter at 100% opacity. For example, if you want to desaturate an image, set Opacity to 10% and apply a monochrome filter.

Undo a Filter

If you do not like the effect of a filter after you've applied it, you can always undo it. The Undo command is especially important when you are work with the Mark NTSC Illegal Colors and Mark PAL Illegal Colors filters. These filters identify illegal areas of your image by changing them to a specified color. Since you probably do not want to keep the new color once you've identified illegal areas of your image, you will want to use the Edit > Undo command or CTRL+Z shortcut to undo the filter before you make any further changes to your image.

Third-Party Filters

Many of the filters you use in Photoshop and in other image manipulation applications can be used in Paint. Once you have specified the filter locations, these filters appear in the Plug-ins section of the Filters list on the Filter tab.

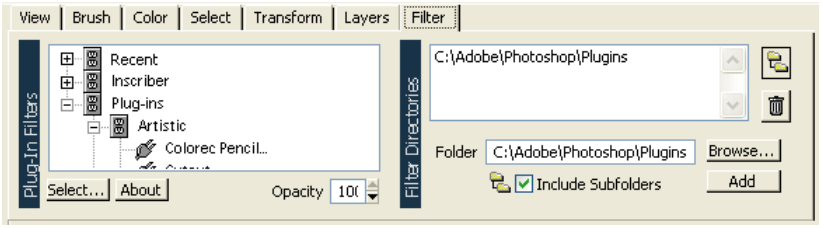


Figure 8-30. Third Party Filters

Define Filter Folders

Before you can use third-party filters in Paint, you need to show Paint what folders the third party plug-in filters are in. Paint remembers the folder locations, so you only have to do this the first time you use Paint or when you install new filters that are not in the current paths. If Paint finds multiple filters with the same name it uses the first one found.

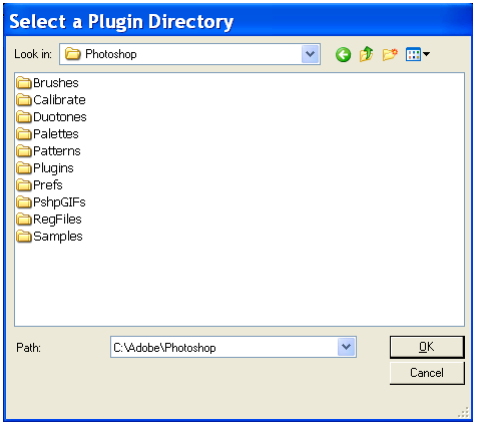


Figure 8-31. Filter Plugin Directory

To specify the folders, click on the Browse button on the Filter tab and select the folder where the filters are located in the Select a Plugin Directory dialog. This dialog will only show folders, not the actual filters

themselves, so do not worry if the folders appear empty. If you know the folder path, you can enter it directly in the Folder field. Once you have selected a path, you can tell Paint to search all subfolders in that folder by selecting the Include Subfolders checkbox. Click on the Add button to add the new path to the list of remembered paths.

Delete Filter Folders

To delete a folder, select the appropriate path from the list in the Filter Directories section of the Filter tab and click on the Trash Can icon.

View Folder Status

You can tell whether Paint searches subfolders in the defined filter folders by looking at the Subfolder Inclusion Status icon, located above the Trash Can. If the icon displays two folders, subfolders are included for the selected path. If the icon displays only one folder, only filters located in the specified folder are available.

Alpha and Third Party Filters

While Inscriber filters can be applied to any channel individually, including the alpha channel, many plug-in filters do not work with the alpha channel. This means that if you have an image that has alpha around it, the third party plug-in filters may only affect the opaque areas.

Photoshop Filters

If you have Photoshop installed on your computer, you can use some of its filters with Paint. Some Photoshop filters require special .dlls to work properly. To find these .dlls, the Photoshop path needs to be in your system path. Once the .dlls are found, the filters will be displayed, but not all of them may work.

Create Textures

You can create three types of textures in Paint: Seamless, Surface, and Alpha. These textures can be used as backgrounds in CG or in Paint, or as textures for text and graphic objects in CG.

Seamless Textures

Seamless textures are good for all text objects, graphic objects, and backgrounds in CG. These textures are small areas that are tiled when used in CG to create a repeating, but seamless, pattern. Since every texture you use in CG is loaded into memory, using seamless textures cuts down on the amount of memory required. A good rule for the maximum size of your seamless textures is one half video resolution (NTSC 360x243 max).

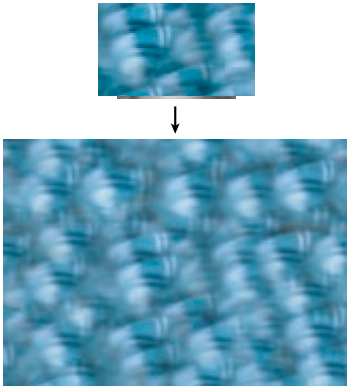


Figure 8-32. Seamless Texture

Follow these steps to create a seamless texture in Paint.

1 Import an image or paint one on the workspace.
2 Use filters and Image Editing tools to create a pattern.
3 Select an area of interest and crop the image.
4 Use the Offset tool to offset the edge pixels to the center of the image.
5 Remove the seam using the Clone, Smear, or Blur tools.
6 Export the image.
7 Import the image as a texture in CG.
8 Select the Tile radio button for text and graphic objects that use the texture.

If you are using the texture as a CG background, make sure the Size to Fit checkbox is cleared. See “Fill with a Seamless Pattern” on page 80 for details on using seamless texture in the CG Editor.

Surface Textures

You can add surface texture to your images by importing an image to use as a texture (File > Import/Export > Import Texture) and applying it with the Texture tool, or any other brush-based tool.

The Texture tool applies the imported texture to the current layer using the layer colors. Darker areas of the texture image take on more color than lighter areas. For example, if you have a picture of a yellow flower with green leaves and you apply a texture with the Texture tool, the texture appears green when applied to the leaves, and yellow when applied to the flower.

Other brush-based tools apply the texture using the current brush-tab settings, including color for the color tools. Lighter areas of the texture image take on more color or are edited more than darker areas.

The Opacity and Texture fields on the Brush tab let you set how much texture is applied to your image. See "Work with Brush Tools" on page 450 and "Edit an Image" on page 477 for details on applying surface textures with the Texture tool or other brush-based tools.

Alpha Textures

Alpha textures are a variation of surface textures. The texture is applied to the entire image, but instead of texturizing the color channels, as in surface textures, in an alpha texture the alpha channel is texturized.

Follow these steps to create an alpha texture.

1 Import an image or fill a layer with color.

2 Import a texture or image file as a selection.

3 Paint with the Alpha Add or Alpha Fill tool, depending on the desired effect. The imported texture or image is applied to the canvas as an alpha texture.

4 Export the image for use in CG.

You can use this texture in CG as a background, logo, or texture.

View Your Image

Paint has a variety of viewing options, located on the View tab. These options, as well as the Zoom and Scroll tools, alter the actual view so you can view all of your image at various magnifications. All views are corrected for the current video aspect ratio.

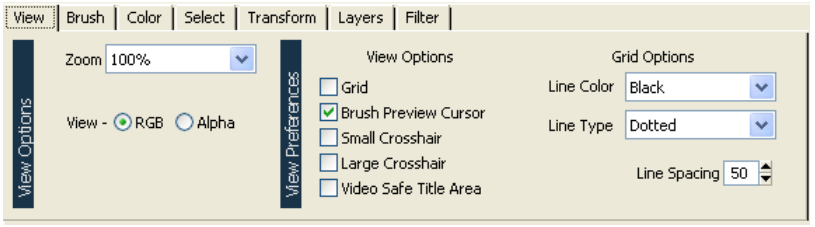


Figure 8-33. View Tab

Zoom

Paint offers several zoom levels, at intervals from I2.5% to 3200%. Either select the desired zoom level from the Zoom drop-down list on the View tab, or use the Zoom tool on the Tools palette.

To zoom in with the Zoom tool, click on the image. To zoom out, hold the ALT key and click on the image. All zoom levels are corrected for the current video aspect ratio.

Scroll (Pan)

While zoomed in on an image, you can move around the image using the Scroll tool. The Scroll tool is useful when you are making selections while zoomed in on your image. You can also use the scroll bars on the right and bottom edges of the Paint workspace. You can hold the SPACEBAR to quickly switch to and use the Scroll tool while using another tool.

View Radio Buttons

The View radio buttons change the views between the RGB channels and the alpha channel. With RGB selected, the image is seen as full color. With Alpha selected, alpha channel is seen as a grayscale image representing the transparency levels for the visible layers. To view the alpha channel for a particular layer, make sure it is the only visible layer and select the Alpha radio button. See "Work with Channels" on page 495 for details on channels.

View Checkboxes

The View checkboxes let you select a variety of options, including grid view, cursor view, and video safe title area. To enable an option, select the checkbox. To disable an option, clear the checkbox.

Grid Options

The grid provides a guide to manually align images, selections, or brush strokes. To view the grid, select the Grid checkbox on the View tab. Then, select the line color and line type from the drop-down lists, and enter a line spacing value.

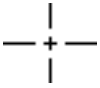
Cursor Options

The View tab offers three cursor options: Brush Preview cursor, Small Crosshair, and Large Crosshair. Each option is enabled or disabled by selecting the appropriate checkbox on the View tab.

The Brush Preview cursor previews the current brush tool. It lets you see the size, shape, opacity, and other attributes before you start painting. This option is enabled by default.

Small Crosshair replaces the standard cursor with a fine crosshair. You can also access the small cursor by pressing CAPS LOCK. The small cursor is useful when you need to edit an image pixel by pixel.

Large Crosshair extends the crosshairs to the edge of your image. This is useful for finding the precise corners on square objects—just line the crosshair up with the object edges.



Video Safe Title Area

The Video Safe Title Area option displays the video safe area defined in CG. The video safe area is the portion of the image normally visible when viewed on an output monitor or television. To edit the Video Safe Title Area, you must switch to the View tab in CG.

Video Aspect Ratio

All views and initial brush settings are corrected for the current video aspect ratio. The current video aspect ratio is set in the Inscribe.ini file. You need three values to set the video aspect ratio: the actual aspect ratio, the horizontal resolution, and the vertical resolution. The formula below gives the correction value that Paint uses. This value is used for the views and the Aspect parameter in the Brush tab.

HorsResolution/VertResolution*Aspect(Vertical)/Aspect(Horizontal)

The parameters in the formula are taken from the Configuration section of the Inscribe.ini file. HorsResolution and VertResolution are actual entries that are set in the Preferences dialog. The Aspect parameter may or may not be in the .ini file. The Aspect parameter should be added as follows:

Aspect=x:y

(where x is the horizontal value and y is the vertical value)

The default aspect ratio for NTSC and PAL is 4:3. The default aspect ratio for HDTV is I6:9. If you need to change the corrected views in Paint, make sure the formula above equals the correction you need. For example, the numbers for NTSC are 720/486*3/4=I.III. If you are creating images for square pixel use, such as web graphics, and you do not want video corrected views, make sure the formula equals I. You do not always have to change the ratio when creating uncorrected images, since you can adjust the aspect of the brush-based tools using the Aspect field on the Brush tab.

Tools and Aspect Ratio

The default value for the Aspect field on the Brush tab is set to the current video aspect. Any brush strokes you make with the default aspect settings are corrected for output. For example, if you are working in NTSC, the default aspect is I.III. If you view images created in Paint at this aspect ratio using another application that does not use variable aspect ratio views, any circular brush strokes or objects appear elliptical. See "Understand Video Color" on page 502 for details.

Work with Layers

In Paint, images are made up of layers. Each layer overlaps the one behind it, allowing you to create complex images by overlapping graphic elements on different layers. You can add, duplicate, delete, rearrange, and merge layers, but you can only work on one layer at a time. This ensures that other layers are not affected by changes you make on a single layer. Each layer has four channels: the red, green, blue, and alpha channels.

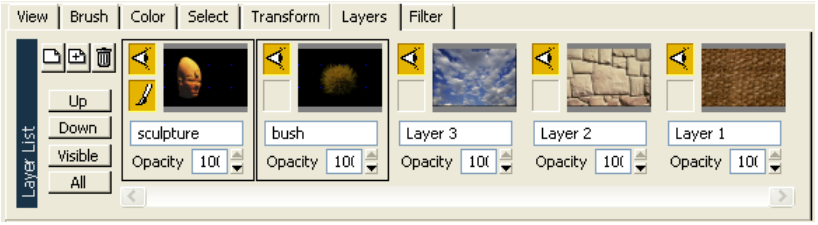


Figure 8-34. Layers Tab

You can only work on one layer at a time. The layer with the Layer Select Toggle on is always the active layer. To switch to another layer, click on the Layer Select Toggle for the desired layer.

View a Layer

You can show or hide a layer by clicking on the View Layer Toggle. There is no limit to the number of layers you can have visible at the same time.

Name a Layer

You can change the layer name in the Name field. By default, layers are named according to numeric order (Layer I, Layer 2, etc.).

Change Layer Opacity

The Opacity field allows you to set layer opacity. Transparent layers allow the layers beneath to show through, creating interesting effects.

Create a New Layer

To add a new layer to your Paint image, click on the New Layer button. The new layer is added above the current layer.

Duplicate a Layer

To duplicate the current layer, click on the Duplicate Layer button. The copy is added above the original layer.

Delete a Layer

To delete the current layer, click on the Delete Layer button (Trash Can). The easiest way to delete many layers at once is to merge the layers and then delete the merged layer.

Rearrange Layers

You can rearrange layers in your document quickly and easily. To move a layer, click on the layer thumbnail and drag it to the location where you want it. To place the layer at the new location, just release the mouse button. The layer is always inserted in front of the layer the cursor is over.

Merging Layers

There are four options for merging layers: Merge Up, Merge Down, Merge Visible, and Merge All.

- Merge Up merges the current layer with the one above it.
- Merge Down merges the current layer with the one below.
- Merge Visible merges all visible layers (those that have the View Layer Toggle selected).
- Merge All merges all layers in the image.

Work with Channels

Every layer is made up of four channels: Red, Blue, Green, and Alpha channels. In Paint you can paint, retouch, transform, and apply filters to any combination of channels, or to each channel individually. If you do not fully understand RGB color theory, you may get confusing results when you work on less than all four channels at once. You should take time to experiment with the channel toggles if you want to work on individual channels.

Paint on Individual Channels

All individual channels can be represented by grayscale images. The gray values range from 0 to 255. When working on individual RGB channels, these values are set using the Color Picker section of the Color tab. Select the RGB color model to set the values to paint with. A value of 255 means you are painting with the full color of the channel (white). A value of 0 means you are painting with the none of the specific color (black). If there is currently color in the specific channel and you are painting with a value of 0, you are actually removing the specific color from the image.

For example, if you select only the red channel and fill it with I27 red and then paint with 255 red, you are adding red to the channel. If you then paint with 0 red, you are removing red from the channel.

The whole process gets more complicated when you are painting on two channels. If you are painting white over black (0, 0, 0) on the red and green channels, you are actually painting with yellow (255, 255, 0). Green and blue make cyan (0, 255, 255); red and blue make magenta (255, 0, 255).

Table 8-19. Add Color to Channels

Painting White on Black	Resulting Color
Red channel	Red (255, 0, 0)
Green channel	Green (0, 255, 0)
Blue channel	Blue (255, 0, 0)
Red and green channels	Yellow (255, 255, 0)
Red and blue channels	Magenta (255, 0, 255)
Green and blue channels	Cyan (0, 255, 255)

Remove Color from Individual Channels

When painting black (0, 0, 0) over white (255, 255, 255) on a single channel you also get initially confusing results. In this case you are actually changing the image color by removing color from a specific channel. For example, if you paint black over white on the red channel, you are creating cyan (0, 255, 255).

Table 8-20. Remove Color from Channel

Painting Black on White	Resulting Color
Red channel	Cyan (0, 255, 255)
Green channel	Magenta (255, 0, 255)
Blue channel	Yellow (255, 255, 0)
Red and green channels	Blue (0, 0, 255)
Red and blue channels	Green (0, 255, 0)
Green and blue channels	Red (255, 0, 0)

Manipulate the Alpha Channel

When you are only working on the alpha channel with non-alpha tools, you can only add opacity. There is no place to specify a value for the color you paint on the alpha channel so Paint always paints with white. The results are the same as if you were painting with the alpha tools.

Understand Channels in Paint

Channels add an extra dimension to Paint and are used for a variety of tasks. In Paint, each layer contains four channels: Red, Green, Blue, and Alpha.

What are Channels?

Images are made up of a series of channels: red, green, blue, and sometimes alpha. Each channel is an 8-bit image that represents a different part of the full image. For example, the red channel contains all the red pixels in the image. When you add the three 8-bit RGB channels, you get a 24-bit full-color image. Most image editing applications work with 24-bit RGB images. In Paint, you add a fourth channel— alpha. The alpha channel contains all the transparent pixels. When you add alpha to an RGB image, you are adding 8 more bits, so you get a 32-bit image.

Visualize Channels

Channels can be represented by a grayscale image. For example, if you open a 32-bit image in Paint and select the Alpha radio button on the View tab to view the image alpha channel, it appears as a grayscale. Black represents full transparency while white represents full opacity. Anything between these two extremes is represented by a shade of gray.

Paint also creates a selection channel when you make a selection. Switch to the Select tab and draw a selection. The thumbnail sketch on the Select tab is a grayscale image representing the current selection channel. White represents fully selected areas, black represents fully unselected areas, and shades of gray represent areas that are partially selected.

How Does Paint Use Channels?

Channels mask out areas of an image. If you select only the red channel, you are masking out the green, blue, and alpha channels so that only the red channel is available for editing. Similarly, the selection channel acts as a mask on the unselected pixels so that only the selected pixels are available.

The Select Channel Dialog

Paint uses the Select Channel dialog when you need to select channel options. Call the Select Channel dialog from the Image As Selection or Layer as Selection buttons on the Select tab whenever you want to select a specific channel. This dialog is also called whenever you import a selection.

The Image thumbnail shows a sketch of the source file. The Selected Channel thumbnail shows a sketch of the current channel, as determined by the Source radio buttons.

The dialog displays four groups of channel settings: Source, Scale, Offset, and Options. The Options settings only appear when there is an active selection in the image.

The Source settings determine which source image channels you use as the selected channel. The available channels are Luminance (All Channels), Grayscale (RGB Channels), Red Channel, Green Channel, Blue Channel, and Alpha Channel. Selecting Luminance (All Channels) combines the red, green, blue, and alpha channels. You can also invert and tile the selected channel.

The Scale and Offset settings let you scale and offset the selected channel. The Scale values are factors and the Offset values are measured in pixels.

The Options settings let you specify how to use the selected channel with the existing selection or transformation. The default setting is to use the selected channel as a new transformation, but you can also add the selected channel to the existing transformation, subtract the selected channel from the existing transformation, or intersect the selected channel with the existing transformation. These options allow you to create interesting effects.

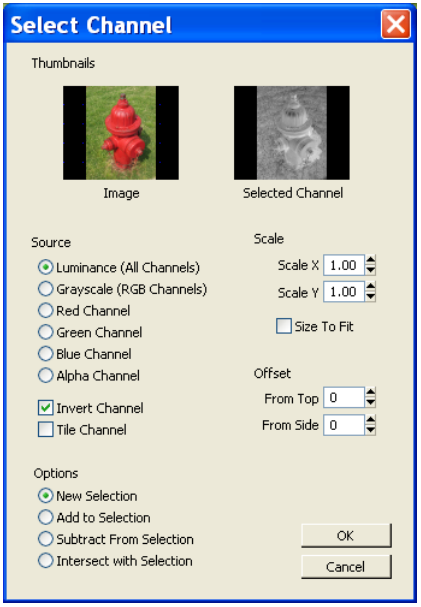


Figure 8-35. Select Channel Menu

Alpha Channel as a Special Case

You may have noticed that the alpha channel appears differently than other channels when you select it. With RGB and selection channels, the red, green, blue, or selected portions of the image appear white in the selected channel thumbnail, and are surrounded by the selection marquee when you close the Select Channel dialog. When you select the alpha channel, the opaque areas of your image are selected, not the transparent areas. If this is confusing for you, you can invert the selection with the Invert Channel checkbox in the Select Channel dialog, or with the Invert button on the Select tab.

Understand Video Images

When editing any image, you need to take many variables into account, including the constraints and benefits of the medium you are working in. Computers have two general image types — vector and bitmap — each with their own limitations. Video, like any other medium, has its peculiarities and design challenges.

Vector-Based Images

Vector-based images describe objects mathematically. In many well-known vector-based programs like CorelDRAW® and Adobe Illustrator, you can tell when an object is vector-based by the aliased edges. CG differs from these packages because the text and graphic object edges are always anti-aliased, even though they are vector-based.

Raster or Bitmap Images

Raster images, also known as bitmaps, describe objects by pixels. These pixels are arranged in a grid, or raster. Since a bitmap is defined by the number of pixels it contains, increasing its size can distort the image. Programs like Microsoft Paint®, PaintShop Pro®, MetaCreations™ Painter™, and Photoshop manipulate raster images. Unlike these applications, Paint is designed specifically for the video and broadcast industry. In CG, logos, textures, and backgrounds are bitmap images. In Paint, Animation, and Frame Grab, all objects are bitmaps, including text.

Resize Bitmaps

Generally, you should not size an image or part of an image much beyond 120% in any application that manipulates bitmap images, including Paint, CG, Animation, Frame Grab, and other paint programs.

Design Challenges

Every design medium has its particular challenges. In print graphics, you need to understand CMYK color space, color separations, and the difference between image size and image resolution. In web graphics, you have to be concerned with file size and web colors. In video graphics, you do not have to worry about image resolution or file size. Image resolution is the size of the image and file size is limited only by free hard drive space and installed RAM.

Dealing with pixel shape, different aspect ratios, and video legal colors are part of the challenge of creating graphics for video. Paint has tools and features that are designed specifically for creating images for video.

Pixel Shape

In the world of computers and print, pixels are square. Pixel shape may seem obvious, but it is important because in the world of video and television, pixels are usually *not* square. Video pixels are actually slightly rectangular, so when you output images to video, your circles become ellipses and your squares become rectangles. Pixel shape is determined by the aspect ratio.

Aspect Ratios

Pixel aspect ratio is defined as the relationship between the width and height of a pixel. Computer monitor pixel aspect ratio is 1:1.

Television and video output ratios are not 1:1. The output picture aspect ratio depends on the standard (NTSC, PAL, or HDTV) you are creating the image for. Some older frame buffers let you define the output resolution separately. The picture aspect ratio for NTSC and PAL is 4:3 (width:height). For HDTV, the picture aspect ratio is 16:9. Paint automatically corrects your images for the current video aspect ratio, so your images do not appear distorted when output to video.

Video Legal Colors

Paint provides a group of video legal filters on the Filter tab. These filters allow you to identify illegal colors and provide several ways of converting them to video safe colors for NTSC or PAL. See "Work with Filters" on page 483 for details.

Understand Video Color

When you are working with graphics, it is sometimes difficult to tell which colors in your image may be illegal. The result of illegal colors is not as severe as it used to be—encoder technology is much better today, and many newer encoders automatically replace problem colors with similar colors. Avoiding illegal colors is now mainly a design consideration, but you should still try to create graphics that do not need to be significantly modified by hardware or software.

Know Your Colors

You should know which colors are problem colors before you begin creating video legal graphics. The least problematic main color is blue, followed by red, and then green. Combinations of red and green tend to produce stronger, and less legal, colors. Saturated yellows are the most problematic colors to work with. One method of guaranteeing that your colors are legal is to work with desaturated colors.

Know Your Tools

Some of the tools in Paint can introduce illegal colors. For example, if you begin with an image that contains video legal colors but then paint with any of the Luminance Add, Luminance Subtract, Dodge, or Burn tools, or apply a filter that affects the luminance or chrominance values, you can potentially introduce illegal colors. But you do not have to avoid these tools or filters—this knowledge should help you create better graphics by predicting problem areas.

Ingredients for Illegal Colors

Colors with high chrominance and luminance values lean towards illegal, especially if they are combinations of red and green. Any highly saturated color that ranges from green to yellow or from red to yellow may be a problem. Colors with high chrominance and low luminance also lean towards illegal, so dark saturated colors can be problems as well.

Again, do not be afraid of using these colors, just use good judgement when using them. For example, if you are working with an image that has detailed areas with light greens, yellows, or reds, make sure the details are not just created with changes in color. Details in these areas must be created by a difference in luminance as well. A difference in luminance implies contrast. Following this guideline is a good idea no matter what colors you are working with.

Saturation and Video

To understand which colors look good in video, you need to experiment with saturation. Colors that look quite different on your computer monitor may appear very similar, if not the same, on video. You should try using more than just different saturation values. Compelling images often have a good range of saturation, luminance, and chrominance.

Open the saturation.ipt file in the TitleOne\Paint\Examples folder and take the image to video. Notice how the difference in saturation is more noticeable on your computer monitor than on your output monitor. With this example, you can see that you often do not need to use highly saturated colors for video images.

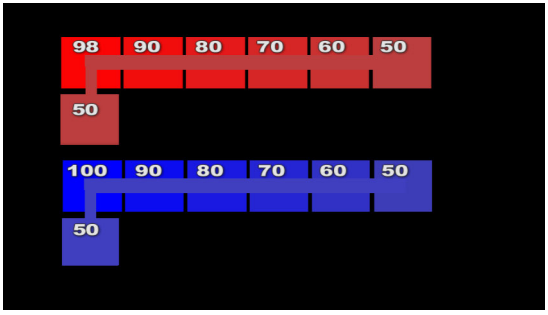


Figure 8-36. Video Saturation

Saturation in the Real World

In the real world, colors are much less saturated than they seem. As an experiment, some footage of everyday objects that seem to have saturated colors was shot with a camcorder.

Import the realworld.tga file in the TitleOne\Paint\Examples folder. On the Color tab, switch to the HLS color model. Select the Color tab Color Picker tool and drag it around the image. As you drag the Eye Dropper, look at the colors being selected. Notice that the saturation values for the colors are fairly low. This shows what the real world looks like when viewed by a video camera.

Figure 8-37. Real World Saturation

RGB Color Gamut and Gamma

Device gamuts describe the available colors that can be displayed on a particular device. The RGB color gamut describes the available colors in video and on the computer. Orange and yellow colors are in limited supply in the RGB gamut, which makes it difficult to select variations of yellow and orange.

Understand the Calibration Process

In order to create stunning video legal images easily, you should calibrate the three components you need to create, view, and output your images. The three components are: Frame Buffer, Output Monitor, and Computer Monitor. Providing complete step-by-step instructions for the calibration process is beyond the scope of this manual, but this topic introduces the concepts and the general steps involved in setting up your system for creating the most usable Paint images. The illustration below shows the parts of a complete Paint system.

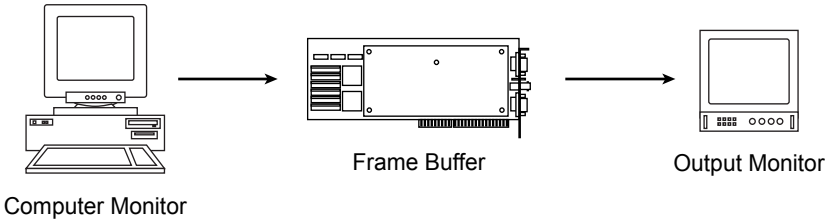


Figure 8-38. Paint System Components

The Need for Calibration

The main goal of calibration is simple: you want the images you create in Paint to look the same in video as they do on your computer monitor. To achieve this goal, you need to be working on a calibrated system. A secondary goal is to be able to use your images on different systems without a huge variation in the output. The key to the secondary goal is a set of frame buffers that are calibrated identically.

In a one-system setup, the secondary goal may not be as important. In this situation you may be able to get away with not calibrating your frame buffer if you create images that look fine on your output monitor. However, this method is not recommended.

Order of Calibration

The order in which you calibrate your devices is important. Unless otherwise stated, you should calibrate your system in the following order:

1 Frame buffer.

2 Output monitor.

3 Computer monitor.

The Frame Buffer

The frame buffer is the most important of the three devices to be calibrated since it actually outputs your images. If the frame buffer is not properly calibrated, your images may experience shifts in color.

Calibrating your own frame buffer is not recommended unless you know what you are doing and have access to the proper equipment. When calibrating a frame buffer, you generally output a test signal and use a waveform and vectorscope to adjust the video levels and colors.

If you are a one-system shop or are only outputting images from the Paint system, you may be able to work around not calibrating your frame buffer. You can try to match colors by eye between the output monitor and the computer monitor by setting your computer monitor to display similar colors to the output monitor. This method is not recommended since you are creating images that only look right if output using the current frame buffer.

The Output Monitor

Of the three devices you need to calibrate, the output monitor is the only one that does not affect the image itself or the image output. However, you still want to calibrate the output monitor since you use it to gauge what your image colors really look like in video. The quality of the image you see on your output monitor is much better than what you would see on the average television.

To calibrate your output monitor, you need to:

- Set the white point.
- Set the black and white levels.
- Adjust the chroma and hue settings.

The color temperature should be set to 6500K (warm). Set the contrast and brightness levels according to the Pluge test pattern. Adjust the chroma and hue according to the SMPTE color bars. See your output monitor documentation or the SMPTE ECR I-I978 document for more information.

The Computer Monitor

Since Paint is a WYSIWYG (what you see is what you get) paint package, you want to make sure your computer monitor is calibrated properly. If you create images without calibrating your monitor, the images will not appear correctly in video. For example, if your gamma is not corrected, oranges may appear red, or yellows may appear orange.

Calibrating your computer monitor involves several steps. You want to set the white point, correct the gamma, and adjust the brightness and contrast. If your monitor allows it, set the white point (using software or hardware) to match the output monitor (6500K).

Computer Monitor Gamma

You can correct the gamma in TitleOne or using third party gamma correction software. To correct your gamma in TitleOne:

1 Import the gamma.bmp file located in the TitleOne\Paint\Examples folder.

2 Select File > Preferences.

3 Adjust the R, G, and B fields on the General tab until the small color bars virtually disappear. You may not be able to get the gray bar to disappear totally.

Computer Monitor Brightness and Contrast

You can set the brightness and contrast while viewing the smpte.bmp file. Import the smpte.bmp file from the TitleOne\Paint\Examples folder. The smpte.bmp file contains an RGB version of the SMPTE color bar with a Pluge test pattern. This image should not be used to calibrate an output monitor since the values on the bottom row cannot reproduce negative voltages.

The Pluge test pattern is what you want to look at—the area at the bottom right of the image. Adjust the brightness and contrast until the dark gray bars disappear.

Environment Variables

When calibrating the output and computer monitors, remember that environment variables such as office lighting and glare from windows affect how you perceive the images. You usually want to make sure light levels are consistent from one day to the next. You also want to minimize glare on the monitors.

Shortcut Keys

In Paint, one of the main ways to speed up your work is to use the shortcut keys. You can use shortcut keys for selecting tools and using Paint functionality.

Table 8-21. Paint Shortcut Keys

Tool	Shortcut Key	Tool	Shortcut Key
General Tools			
Color Picker	CTRL+SHIFT+ALT+I	Zoom In	CTRL+SHIFT+ALT+Z
Scroll	CTRL+SHIFT+ALT+H	Zoom Out	CTRL+ALT+Z
Transformation Tools			
Move	CTRL+SHIFT+ALT+V	Skew	CTRL+ALT+T
Rotate	CTRL+T	Freeform	CTRL+SHIFT+T
Scale	CTRL+SHIFT+ALT+T		
Color Tools			
Brush	CTRL+SHIFT+ALT+B	Fill	CTRL+SHIFT+ALT+K
Airbrush	CTRL+SHIFT+ALT+A	Tolerance Fill	CTRL+ALT+K
Pencil	CTRL+SHIFT+ALT+Y	Luminance Fill	CTRL+SHIFT+K
Eraser	CTRL+SHIFT+ALT+E	Linear Gradient	CTRL+SHIFT+ALT+G
Line	CTRL+SHIFT+ALT+N	Radial Gradient	CTRL+ALT+G
Alpha Tools			
Alpha Add	CTRL+SHIFT+ALT+J	Alpha Linear Gradient	CTRL+SHIFT+ALT+P
Alpha Subtract	CTRL+ALT+J	Alpha Radial Gradient	CTRL+ALT+P
Alpha Memory	CTRL+SHIFT+ALT+R		
Image Editing Tools			
Clone	CTRL+SHIFT+ALT+S	Dodge	CTRL+SHIFT+ALT+O
Clone Fill	CTRL+ALT+S	Burn	CTRL+ALT+O
Offset	CTRL+ALT+U	Luminance Add	CTRL+SHIFT+ALT+Q
Smear	CTRL+SHIFT+ALT+U	Luminance Subtract	CTRL+ALT+Q

Table 8-21. Paint Shortcut Keys

Tool	Shortcut Key	Tool	Shortcut Key
Selection Tools			
Wand	CTRL+SHIFT+ALT+W	Linear Lasso	CTRL+ALT+L
Luminance Wand	CTRL+ALT+W	Rectangular Selection	CTRL+SHIFT+ALT+M
Selection Brush	CTRL+SHIFT+ALT+C	Elliptical Selection	CTRL+ALT+M
Lasso	CTRL+SHIFT+ALT+L		

Functionality

Some of the most popular features in Paint also have shortcut keys. These features are listed below.

Functionality	Shortcut Key	Functionality	Shortcut Key
Cut	CTRL+X	Undo	CTRL+Z
Copy	CTRL+C	Redo	CTRL+SHIFT+Z
Paste	CTRL+V		CTRL+Y
Select All	CTRL+A		CTRL+R
Select None	CTRL+D	Redraw	CTRL+SHIFT+R
Select Visible	CTRL+ALT+A	Duplicate Layer	CTRL+ALT+D
Select Invisible	CTRL+SHIFT+A	New Layer	CTRL+ALT+N
Invert Selection	CTRL+SHIFT+I	Merge Up	CTRL+ALT+E
Crop	CTRL+SHIFT+C	Merge Down	CTRL+E
View Normal	CTRL+SHIFT+0	Merge Visible	CTRL+SHIFT+E

Chapter 9

Resources

Information on preferences and shortcut keys.

Preferences Dialog

The Preferences dialog includes a number of options that allow you to setup your system and workspace preferences. See the following information for details on each option.

General Tab

Table 9-1. General Tab Preferences

Option	Description
HORZ, VERT	Horizontal and vertical resolution sets the width and height of rendered images. The values must match the board resolution in online mode. Horizontal resolution is measured in pixels, and vertical resolution is measured in scanlines.
NTSC, PAL	Video standard sets the standard you are working in. Layouts designed in one standard and output on another can produce undesired results.
4:3, I6:9	Aspect ratio is the relationship between the width and height of an image. The shape of the individual pixels determines the aspect ratio. Layouts designed in one aspect ratio and output on another can produce undesired effects.
Multi-Channel Operation	Enables multiple output boards to work as separate program channels. Clear this option to use multiple output boards as a Program/Preview system. This option is not applicable when working offline.
Disable Board Access	Sets TitleOne to avoid sending information to the output board. When selected, this option disables output functionality on the output monitor. Clear this option to allow TitleOne to send information to the output board and enable output functionality.

Table 9-1. General Tab Preferences

Option	Description
External Serial Control	Enables serial port trigger functionality in TitleOne. Clear this option to disable serial port trigger support when no serial port trigger is used.
Disable Text Filtering	Disables automatic blur and pixel rise-time filters applied to text characters. Clear this option to apply blur and pixel rise-time filters on text.
1:1 Display Aspect Ratio	Displays workspace image pixels on the computer monitor as a 1:1 ratio instead of a video-correct 4:3 or 16:9. Clear this option to set the workspace display to the current aspect ratio.
Line 21 Protected	Prevents Closed Captioning from being overlapped by graphics. Clear this checkbox if Closed Captioning is not part of the video signal.
Disable Copy On Open	Disables TitleOne from making backup copies of your .scribelist files when you open them.
Silent Video Init	Stops the output of the start-up screen when TitleOne is opened. Clear this option to output the output board start-up screen when TitleOne is opened.
Video Dither	Applies a dither filter that compensates for banding that appears with reduced color resolution during conversions on some output boards. The dither filter improves the look of gradients. Choose the setting based on your output board. Enter 0 to avoid applying the dither filter.

Table 9-1. General Tab Preferences

Option	Description
Windows Gamma	Sets the VGA display to match the video output. You can set the red, green, and blue channels separately. Gamma correction changes the midtones without modifying the extremes of the brightness range. Increase the gamma values to lighten midtone ranges, or decrease the gamma values to darken the midtone ranges. The default gamma value of 1.0 means the VGA display is not corrected.
Video Transparent Pattern	Sets the pattern TitleOne displays that represents the video transparent areas of an image or a layout. The pattern displayed is not saved as part of the layout information.

Project Tab

Table 9-2. Project Tab Preferences

Option	Description
Search Order	Sets the path order that TitleOne uses to search for layout media.
Materials Path	TitleOne searches this path when looking for referenced materials in layouts.
Show Filename in Job Strip	Displays the rendered image filename in the playlist instead of the event number. Clear this option to display event numbers in the playlist. You must check this option to use the Navigate dialog.
Open the Most Recently Used Job on Launch	Opens the most recently used playlist when you launch TitleOne.
Write Scrapbook Items to Disk	Allows you to save individual Scrapbook items to disk.

Character Generator Tab

Table 9-3. Character Generator Tab Preferences

Option	Description
Scale Type	Sets the type of scaling for layouts opened in a different resolution than they were created in. • Letterbox fits the layout into the new workspace without any change in aspect ratio. • Crop scales and centers the layout to fill the workspace, cropping the outside edges. • Size-To-Fit adjusts the aspect ratio of the layout to fill the new workspace.
Warn Layout Changes	Sets TitleOne to warn you before you select a new template in CG. The warning reminds you that the new template deletes the existing CG content in the workspace. You can copy text from the existing layout to the new template. Clear this option to avoid the new template warning.
Default Sample Strings	Sets the default text strings displayed for the styles in the Style Library.
Language Dictionaries	Opens the Lexicon Selection dialog to customize the languages and dictionaries available in TitleOne. Check one or more Languages and User Lexicons (dictionaries) as needed. Clear Languages and/or User Lexicons that you don't need access to. Click Close to return to the Preferences dialog.

Sequencer Tab

Table 9-4. Sequencer Tab Preferences

Option	Description
Default Colors	Customizes both the text and background color of the Sequencer playlist. • Select a display option from the list. • Select a text color with the Text color chips. • Select a background color with the Background color chips. The Sample Text area shows you what the color combination looks like. The Sample Text area is located below the list.
Reset	Resets the selected object in the list to its default color.
Reset All	Resets all the objects in the list to their default colors.
Default to Group Headers	Inserts a group header each time you add an event to the current playlist.
Default to Non-Keyed Cuts	Sets the keying type for cut transitions to a full-screen, 32-bit cut by default. Clear this option to set cuts to 32-bit for the center 512 scanlines and a wipe for the rest of the scanlines.
Default Trigger	Applies the selected trigger type to new group headers.
GPI Port	Selects the system COM port your GPI device is connected to.

Table 9-4. Sequencer Tab Preferences

Option	Description
On-Line Output Directory	Sets the folder location for all rendered Sequencer files. Leave this option blank to store all rendered files in a subfolder where the SCRIBELIST file is stored. Click the Browse button to navigate to and select a folder.

Store Paths Tab

Feature Note Media Store is a purchase option in TitleOne.

Table 9-5. Store Paths Tab Preferences

Option	Description
Default Title	Automatically assigns the entered title to every media file included in a Media Store database build. • To automatically use the filename as the default title, select the Auto Use File Name checkbox. • To automatically use the network drive name or compact disc volume name as the default title, select the Auto Use Volume Label checkbox.
Default Keywords	Automatically assigns the entered keywords to every media file included in a Media Store database build. • To automatically use the filename as the default keyword, select the Auto Use File Name checkbox. • To automatically use the network drive name or compact disc volume name as the default keyword, select the Auto Use Volume Label checkbox.
Thumbnail Text	Sets TitleOne to display either the file name, the first keyword, or the title on the image thumbnails in the Media window.

Table 9-5. Store Paths Tab Preferences

Option	Description
Date Format	Sets the date format used in Media Store: DD-MM-YYYY, MM-DD-YYYY, or YYYY-MM-DD. The format is controlled by the Date Format option. Media Store date fields, for example, the file date on the Key Info tab, use the format specified by the Date Format option. Also, if you define a search using the Date search key, you must use the current Media Store date format.
Case Insensitive	Sets TitleOne to perform case-insensitive searches.
Location Name	Names the location for the reference files Media Store creates when you view images in the Media window. By default, the location is named Default and the following fields (Server, Local, and Browse) set the locations for saving the referenced files.
Server, Local, Browse	Sets the location for storing image reference files. Store creates the reference files when you view images in the Media window. Click the Browse button or enter the path in the fields to set the location.

Folios Tab

Feature Note Media Store is a purchase option in TitleOne.

Table 9-6. Folios Tab Preferences

Option	Description
Default Sort Order	Sets the default order for the image thumbnails in the Media window. The default sort order is None, which sorts the files by media number.

Browser Tab

Feature Note Media Store is a purchase option in TitleOne.

Table 9-7. Browser Tab Preferences

Option	Description
Live Update/ Directories list	Displays the folders that the Media window will not automatically update with file changes, when the folder is currently selected in browse mode (BI folio). If the folder is not currently selected, file changes are updated in the Media window the next time you select the folder.
Defaults	Sets TitleOne to ignore the default folders.
Clear	Clears all folders from the list.
Add	Adds a new folder to the list.
Delete	Deletes the selected folder from the list.

Cache Tab

Feature Note Media Store is a purchase option in TitleOne.

The Cache tab allows you to set the amount of RAM available for performing functions in the Media window. The Record Cache improves scrolling through image thumbnails with smaller databases. The Node Cache speeds up searches and improves very large database access.

Once your system is configured, you should not have to change these settings.

Table 9-8. Cache Tab Preferences

Option	Description
Max Size field	Enter the amount of RAM you want available for each cache.
Bytes Used field	Reports the amount of data currently stored in the available RAM.
Hit Rate field	Reports the effectiveness of the cache. For example, if TitleOne retrieves information from the cache 1/3 of the time, then the hit rate is 33%.
Hits field	Displays the number of hits, which is used in calculating the Hit Rate.
Misses field	Displays the number of misses, which is used in calculating the Hit Rate.
Defaults button	Resets the caches back to the default sizes.

Shortcut Keys

The following information provides a quick reference to the TitleOne shortcut keys.

Global Shortcuts

Action	Shortcut	Action	Shortcut
New	CTRL + N	Copy	CTRL + C
Open	CTRL + O	Paste	CTRL + V
Save	CTRL + S	Undo	CTRL + Z
Print Playlist	CTRL + P	Redo	CTRL + Y
Cut	CTRL + X	Help	F1

Switch Modules

Action	Shortcut	Action	Shortcut
CG	F6	Media Store (Media Store is a purchase option in TitleOne.)	F9
Sequencer	F11	Paint	F8
Animation	SHIFT+F6	Frame Grab	F7

Playlist Shortcuts

Action	Shortcut	Action	Shortcut
Open new playlist	CTRL+N	Select next event	ALT+PAGE DOWN
Open playlist	CTRL+O	Select previous event	ALT+PAGE UP
Print playlist	CTRL+P	Select first event	ALT+HOME
Save playlist	CTRL+S	Select last event	ALT+END

Action	Shortcut	Action	Shortcut
Cut event	ALT+SHIFT+X	Log event down	CTRL+L
Copy event	ALT+SHIFT+C	Log default event	CTRL+SHIFT+G
Paste event	ALT+SHIFT+V	Log event up	CTRL+SHIFT+L
Undo cut, copy, paste events	ALT+SHIFT+Z		

Output Shortcuts

Action	Shortcut	Action	Shortcut
Setup event	Number pad MINUS Sign key (-)	Open Change Render Name dialog	CTRL+J
Take event	Number pad ENTER	Open Navigate dialog	CTRL+SHIFT+J
Stop current take	ESC	Select event in Navigate dialog	ENTER
Increase output speed of rolls/ crawls	SHIFT + Page Up	Take event in Navigate dialog	Number pad ENTER
Decrease output speed of rolls/ crawls	SHIFT + Page Down	Delete event in Navigate dialog	DELETE
Start/stop roll/ crawl output	PAUSE	Close Navigate dialog	ESCAPE
Switch Online/ Offline	SHIFT+CTRL+O	Make Shotbox field active when Shotbox is visible in the workspace	F12
Clear DVE	CTRL+F12		

CG Shortcuts

Action	Shortcut	Action	Shortcut
Text Objects			
Move cursor to previous line	UP ARROW	Select character to left of cursor	SHIFT+LEFT ARROW
Move cursor to next line	DOWN ARROW	Select character to right of cursor	SHIFT+RIGHT ARROW
Jump to start of line	HOME	Select word to left of cursor	CTRL+SHIFT+LEFT ARROW
Jump to end of line	END	Select word to right of cursor	CTRL+SHIFT+ RIGHT ARROW
Jump to first line in text object	CTRL+HOME	Select from cursor to previous line	SHIFT+UP ARROW
Jump to last line in text object	CTRL+END	Select from cursor to next line	SHIFT+DOWN ARROW
Jump to start of word	CTRL+LEFT ARROW	Select from cursor to start of line	SHIFT+HOME
Delete selected text; remove character to the right of the cursor	DELETE	Select from cursor to end of line	SHIFT+END
Delete selected text; remove character to the left of the cursor	BACKSPACE	Select from cursor to start of object	CTRL+SHIFT+ HOME
Delete text to end of line	SHIFT+DELETE	Select from cursor to end of object	CTRL+SHIFT+END
Switch to Insert cursor	CTRL+=	Switch to Auto Erase cursor	CTRL+-

Action	Shortcut	Action	Shortcut
Switch to Lock cursor	CTRL+0		
Text Rows			
Make row	CTRL+ENTER	Cut row	CTRL+SHIFT+X
Swap rows	CTRL+SHIFT+C followed by CTRL+/	Paste row	CTRL+SHIFT+V
Copy row	CTRL+SHIFT+C	Paste row above	CTRL+SHIFT+ALT +V
Move row up and swap with row directly above	CTRL+SHIFT+U P ARROW	Move row down and swap with row directly below	CTRL+SHIFT+ DOWN ARROW
Manage Objects			
Move object one pixel in any direction	ALT+ARROW	Cut object	CTRL+X
Move object I0 pixels in any direction	ALT+CTRL+AR ROW	Copy object	CTRL+C
Move object by number of pixels in the Pixels field	CTRL+ARROW	Paste object	CTRL+V
Bring to front	CTRL+F	Select multiple objects	SHIFT+click on each object
Send to back	CTRL+B	Move text object	Select text object then SHIFT+drag
Layouts			
Redraw CG workspace	CTRL+D	Load template with Template Manager	ENTER

Action	Shortcut	Action	Shortcut
Open Layout Type list	CTRL+E	Load next template with Template Manager	ALT+W
Open Templates list	CTRL+R	Load multiple templates with Template Manager	CTRL+SHIFT+ ENTER
Open Template Manager dialog	CTRL+SHIFT+R		
Text Tools			
Text Constraint Field tool	CTRL+]	Paragraph Field tool	CTRL+T
Text Field tool	CTRL+[	Fixed Width Paragraph tool	CTRL+H
Vertical Text Field tool	CTRL+SHIFT+[	Vertical Paragraph Field tool	CTRL+SHIFT+T
Vertical Text Constraint tool	CTRL+SHIFT+]	Vertical Fixed Width Paragraph tool	CTRL+SHIFT+H
Layout Tree View			
Bring To Front	CTRL + F	Send Backward	CTRL + SHIFT + B
Bring Forward	CTRL + SHIFT + F	Delete selected objects	DELETE
Send To Back	CTRL + B	Lock/Unlock selected object's position	CTRL + SHIFT + P

Animation Editor

Action	Shortcut	Action	Shortcut
Keyframes			

Action	Shortcut	Action	Shortcut
Cut keyframe	CTRL+X	Insert keyframe before	SHIFT+INSERT
Copy keyframe	CTRL+C	Insert keyframe at current frame	ALT+INSERT or CTRL+ALT+E
Paste keyframe	CTRL+V	Paste keyframe at current frame	CTRL+ALT+V
Delete keyframe	DELETE	Paste keyframe attributes	CTRL+SHIFT+V
Insert keyframe at default	INSERT or CTRL+E	Select first keyframe in path	HOME
Insert keyframe after	CTRL+INSERT	Select last keyframe in path	END
Select next keyframe	CTRL+W	Select previous keyframe	CTRL+Q
Select all keyframes	CTRL+A	Adjust keyframe using current tool	ARROW keys
Constrain tool to X axis	1+click and drag	Constrain tool to Z axis	3+click and drag
Constrain tool to Y axis	2+click and drag		
Layout			
Redraw FX workspace	CTRL+D	Preview current frame	CTRL+F
Play wireframe preview of animation in FX workspace	CTRL+H		
Animation Paths			
Select first path	CTRL+HOME	Select next path	CTRL+PAGE DOWN

Action	Shortcut	Action	Shortcut
Select last path	CTRL+END	Select previous path	CTRL+PAGE UP

Sequencer

Action	Shortcut	Action	Shortcut
Insert group header	CTRL+T	Select all events	CTRL+A
Remove group header	CTRL+U	Select multiple events	Hold CTRL or SHIFT and click to select

FrameGrab

Action	Shortcut
Grab video frame	CTRL+G

Media Store

Feature Note Media Store is a purchase option in TitleOne.

Action	Shortcut	Action	Shortcut
Scroll to top of Media window	CTRL+HOME	Search for media in Media window	F2
Scroll to bottom of Media window	CTRL+END	Find media in Media window	F3
Scroll up one page in Media window	CTRL+PAGE UP	Find media again in Media window	SHIFT+F3
Scroll down one page in Media window	CTRL+PAGE DOWN	Sort media in Media window	F4
Scroll up one line in Media window	CTRL+UP ARROW	Refresh Media window	F5

Action	Shortcut	Action	Shortcut
Scroll down one line in Media window	CTRL+DOWN ARROW	Build media into Media Store database	CTRL+B
Select all media in Media window	CTRL+A	Add media to a layout Media Library as a logo	CTRL-drag media to layout in playlist
Select multiple items	Hold CTRL or SHIFT and click to select	Add media to playlist as a background	CTRL+ALT+SHIFT-drag media to playlist
Cut media	SHIFT+CTRL+X	Add media to a layout Media Library as a texture	CTRL+SHIFT-drag media to layout in playlist
Copy media	SHIFT+CTRL+C	Update changes	CTRL+U
Launch Build Media Store dialog with media on Clipboard	SHIFT+CTRL+V	Delete media from Media window	CTRL+D
Grab a video frame and add it to Build folio	CTRL+G	Add media to Scrapbook	SHIFT+CTRL+A

Paint

Action	Shortcut	Action	Shortcut
Selections			
Select all pixels	CTRL+A	Crop to selection	CTRL+SHIFT+C
Select visible pixels	ALT+CTRL+A	Invert selection	CTRL+SHIFT+I
Select invisible pixels	CTRL+SHIFT+A	Select none (remove selection)	CTRL+D
Layers			
New layer	CTRL+ALT+N	Merge layer down	CTRL+E

Action	Shortcut	Action	Shortcut
Duplicate layer	CTRL+ALT+D	Merge visible layers	CTRL+SHIFT+E
Merge layer up	CTRL+ALT+E		

RapidFire

Action	Shortcut	Action	Shortcut
Function Keys			
Load layout from registry into Scratch.vii layout	F2	Write Scratch.vii layout to playlist	F5
Write Scratch.vii layout to registry (update only)	F3	Write Scratch.vii layout to working directory (if Load From Working Directory option is enabled) or Media Store (if option is disabled). See "Set the Working Directory" on page 64. (Media Store is a purchase option in TitleOne.)	SHIFT+F5
Load layout from playlist into Scratch.vii layout	F4	Grab a video frame and load it into Scratch.vii layout	CTRL+G

Action	Shortcut	Action	Shortcut
Load layout from working directory (if Load From Working Directory option is enabled) or Media Store (if option is disabled) into Scratch.vii layout. See "Set the Working Directory" on page 64. (Media Store is a purchase option in TitleOne.)	SHIFT+F4		
Number Pad Keys			
Swap contents of program channel 1 and program channel 2	/	Find the next free number in the sequence	CTRL+ PLUS SIGN
Switch the output channel	*	Load layout from playlist (if focus is in RapidFire text field). Otherwise, take event.	ENTER

Action	Shortcut	Action	Shortcut
Set up event	-	Load layout from working directory (if Load From Working Directory option is enabled) or Media Store (if option is disabled) into Scratch.vii layout. Focus must be in RapidFire text field. See "Set the Working Directory" on page 64. (Media Store is a purchase option in TitleOne.)	SHIFT+ENTER
Set up event as linked event	SHIFT+ MINUS SIGN	Clear all output channels	CTRL+SHIFT+*
Read the next item in sequence	+	Clear the Scratch.vii layout and load default template.	CTRL+*
Find the previous item in the sequence	SHIFT+ PLUS SIGN	Clear RapidFire text field	PERIOD

For RapidFire keyboard key descriptions, see "RapidFire Keyboard" on page 532.

RapidFire Keyboard

If you purchased the RapidFire Keyboard option for TitleOne, you received the custom RapidFire keyboard designed for sports and live event coverage.

The following illustration shows the RapidFire keyboard with colored keycaps and labels.

The following tables describe the function of the RapidFire keys.

Modules

Number	Key	Function
1		Switches to CG.
2		Switches to Sequencer.
3		Switches to Media Store. (Media Store is a purchase option in TitleOne.)
4		Switches to Animation Editor.

Number	Key	Function
5		Switches to Frame Grab.
6		Switches to Paint. (Paint is a purchase option in TitleOne.)

Predefined Media Store Files

Feature Note Media Store is a purchase option in TitleOne.

Number	Key	Function
7	STORE 1	Loads predefined Media Store file (assigned to the Shot Box palette Defined button 1) to the workspace. The file is centered on the workspace.
8	STORE 2	Loads predefined Media Store file (assigned to the Shot Box palette Defined button 2) to the workspace. The file is centered on the workspace.
9	STORE 3	Loads predefined Media Store file (assigned to the Shot Box palette Defined button 3) to the workspace. The file is centered on the workspace.
10	STORE 4	Loads predefined Media Store file (assigned to the Shot Box palette Defined button 4) to the workspace. The file is centered on the workspace.

Overlay

Number	Key	Function
11	OVERLAY	Toggles Overlay open and closed
12	STOP	Stops all layers, for example, stops clocks and counters
	SHIFT+STOP	LAYER 1 - Toggles Overlay layer 1 between the show and hide states, but does not take the change to air

Number	Key	Function
I3	ALL ON	Turns all Overlay layers on
	SHIFT+ ALL ON	LAYER 2 - Toggles Overlay layer 2 between the show and hide states, but does not take the change to air
I4	ALL OFF	Turns all Overlay layers off
	SHIFT+ ALL OFF	LAYER 3 - Toggles Overlay layer 3 between the show and hide states, but does not take the change to air

Text Editing

Number	Key	Function
I5	TEXT	Selects Text Field on the CG Tools palette.
I6	DELETE CURSORS	Deletes all unused, empty objects on the layout. If an empty object is selected, it is not deleted.
I7	DELETE END	Deletes all text from the cursor position to the end of the line.
I8	STYLE LIBRARY	Opens Template Manager (Style Library).
I9	NEWS EDIT	Opens News Edit.
20	CRAWL	Switches layout type to crawl.
	SHIFT+CRAWL	ROLL - Switches layout type to roll.
21	CENTER ROW	Centers selected rows horizontally on the layout.
22	CENTER PAGE	Centers all items horizontally and vertically on the layout.

Layout

Number	Key	Function
23	GUIDES/ MARKERS	Toggles on and off guides and markers, for example, safe area, grid, and tags.
24	SPELL CHECK	Opens Spell Check.

Number	Key	Function
25	LOGO	Inserts a logo region on the workspace.
26	BG	Imports a background file. The Open dialog opens to allow you to select a file.
	CTRL+BG	Removes background.
	SHIFT+BG	Opens background editor.
27	SWAP ROWS	If one row is selected and another has been copied for swapping, swaps the rows.
	SHIFT+ SWAP ROWS	Copies row for swapping.

Strata

Feature Note The Strata Configuration Utility is a purchase option in TitleOne.

Number	Key	Function
28	SETUP LINKED EVENT	Sets up the event as a linked event. Each event must be assigned to a different output channel. Linked events are taken to air simultaneously.
29	STRATA I	Assigns the event to Strata layer I.
	SHIFT+ STRATA I	Clears the event on Strata layer I.
30	STRATA 2	Assigns the event to Strata layer 2.
	SHIFT+ STRATA 2	Clears the event on Strata layer 2.
31	STRATA 3	Assigns the event to Strata layer 3.
	SHIFT+ STRATA 3	Clears the event on Strata layer 3.
32	STRATA 4	Assigns the event to Strata layer 4.
	SHIFT+ STRATA 4	Clears the event on Strata layer 4.

Clear

Number	Key	Function
33	CLEAR BOTH	Clears all output channels (both video boards).
34	CLEAR ALL	Clears all output channels and the Scratch.vii layout. The default template loads into Scratch.vii. See "Set Default Template" on page 72.
37	CLEAR 1	Clears output channel 1.
38	CLEAR 2	Clears output channel 2.

3D FlyBy, Auto Text, and Animation

Number	Key	Function
35	IMPORT 3D	Imports a 3D animation. The Import 3D Animation dialog opens to allow you to select files: COLLADA (.dae) file and animation source frames. (3D FlyBy is not supported in TitleOne.)
36	AUTO TEXT	Inserts specified Auto Text string in text field. For more information, see "Insert a Text String from the Auto Text File" on page 70.
	SHIFT+ AUTO TEXT	Opens configuration dialog, which lists all Auto Text strings for current playlist.
	CTRL+ALT+ AUTO TEXT	Opens the Auto Text file for the current playlist in Windows Notepad. If the file does not exist, RapidFire can create it. For more information, see "Create an Auto Text File" on page 69.
39	VIA TRANS 1	Plays the first predefined transition .via file before displaying the active event or event called by RapidFire.
	SHIFT+ VIA TRANS 1	Plays the third predefined transition .via file before displaying the active event or event called by RapidFire.

Number	Key	Function
40	VIA TRANS 2	Plays the second predefined transition .via file before displaying the active event or event called by RapidFire.
	SHIFT+ VIA TRANS 2	Plays the fourth predefined transition .via file before displaying the active event or event called by RapidFire.

RapidFire

Number	Key	Function
41	RECORD LAYOUT	Writes layout to playlist (specified in RapidFire text field) from Scratch.vii.
	SHIFT+ RECORD LAYOUT	If the Load From Working Directory option is enabled (see "Set the Working Directory" on page 64), writes the Scratch.vii layout to the working directory as a layout (filename without extension specified in the RapidFire text field). If the Load From Working Directory option is disabled (see "Set the Working Directory" on page 64), writes the Scratch.vii layout to Media Store as a template layout (media number specified in the RapidFire text field). (Media Store is a purchase option in TitleOne.)
42	SWAP	Swaps the contents of program channel 1 and program channel 2 (requires a two channel system or two virtual channels set up using Strata). The current channel is indicated by the number displayed in the bottom left (under the playlist) of the TitleOne window.
43	CHANGE	Switches the output channel for the current event.
	CTRL+ CHANGE	Clears Scratch.vii layout. The default template loads into Scratch.vii. See "Set Default Template" on page 72.

Number	Key	Function
44	SETUP EVENT	Sets up event: previews event.
45	READ	Reads the next item in the sequence. For example, if 200 is in the RapidFire text field and the next item is 232.vii, RapidFire loads 232.vii into Scratch.vii.
	SHIFT+READ	Finds the previous item in the sequence. Note: The item is not loaded.
	CTRL+READ	Finds the next free number after the current number in the sequence.
46	TAKE	If the focus is in the RapidFire text field, reads the layout from the sequencer into Scratch.vii and does not output. Otherwise, takes the current layout to the current output channel.
	SHIFT+TAKE	**Note:** The focus must be in the RapidFire text field. If the Load From Working Directory option is enabled (see "Set the Working Directory" on page 64), loads the layout from the working directory (filename without extension specified in the RapidFire text field) into the Scratch.vii layout. If the Load From Working Directory option is disabled (see "Set the Working Directory" on page 64), loads the Media Store template layout (media number specified in the RapidFire text field) into the Scratch.vii layout. (Media Store is a purchase option in TitleOne.)
47	DEL	Clears RapidFire text field.
	SHIFT+DEL	FOCUS - Changes focus to the objects on the workspace.

RTXports Code Sample

If you purchased the RTXports option for TitleOne, you play custom or third-party RTX applications on your Inscriber system. For more information on RTXports, see "Port Objects" on page 145.

The following Visual Basic code demonstrates how to create an RTXports application. This application generates a continuous crawl. Each loop contains a text layer that is updated each loop and an animation. You can use a continuous crawl to display live-feed data, for example, financial ticker or school closings information.

```
'Force all variables to be declared.
Option Explicit

'Initialize the RTXLib by declaring
'the RTX object for the project.
Dim myRTX As New RtxLib.Rtx

'Declare an RTXContext variable.
Dim GlobCon As RtxLib.RTXContext

'Declare a ContinuousCrawl variable with events.
Dim WithEvents contCrawl As RtxLib.ContinuousCrawl
'Declare a FrameBuffer variable.
Dim crawlFB As RtxLib.FrameBuffer
'Declare an RTXContext variable.
Dim crawlCon As RtxLib.RTXContext

'Declare Layer, Animation,
'and FrameBuffer variables.
Dim crLayer As RtxLib.Layer
Dim crAnim As RtxLib.Animation
Dim animFB As RtxLib.FrameBuffer
'Declare an integer for keeping track of the
'number of times you queue crLayer.
Dim LayerCount As Integer

Private Sub Form_Load()

    'Set the GlobCon variable to the global RTXContext.
    Set GlobCon = myRTX.GlobalContext

    '**********************************
    ' Instantiate global variables

    Set contCrawl = New RtxLib.ContinuousCrawl
```

```
Set crawlFB = New RtxLib.FrameBuffer
Set crawlCon = myRTX.NewContext
Set crLayer = New RtxLib.Layer
Set crAnim = New RtxLib.Animation
Set animFB = New RtxLib.FrameBuffer

'***********************************
' Name the RTXContexts

GlobCon.Name = "Global Context"
crawlCon.Name = "Crawl Context"

'***********************************
' Prepare for drawing to crLayer

'Set LayerCount to 0.
LayerCount = 0

'Set the size of crLayer.
crLayer.SetSize 200, 100

'Set crLayer as GlobCon's current Layer.
GlobCon.Layer = crLayer

'***************************************
' Prepare and show the Animation

'Add the Animation file so you can set the
'FrameBuffer to the Animation's dimensions.
crAnim.AddFile App.Path & "\clogo.via"

'Prepare and set up animFB.
With animFB
    'Set to have no container.
    .Container = Null
    'Set the dimensions.
    .Width = crAnim.Width
    .Height = crAnim.Height
    'Set up.
    .Setup GlobCon
End With

'Prepare and show the Animation.
With crAnim
    'Set the destination FrameBuffer.
    .FrameBuffer = animFB
    'Set to loop infinitely.
```

```
        .Loop = True
        'Set up and show.
        .Setup GlobCon
        .Take
    End With

    '*****************************************
    ' Prepare objects for the ContinuousCrawl

    'Define and set up the destination FrameBuffer.
    With crawlFB
        'Set the bounds.
        .SetBounds 0, GlobCon.Height - 200, 720, 200
        'Set up.
        .Setup crawlCon
    End With

    'Prepare the ContinuousCrawl.
    With contCrawl
        'Set the destination FrameBuffer.
        .FrameBuffer = crawlFB
        'Set to use Inscriber RTX data feed.
        .UseLegacyDataFeed = False
        'Set the speed and direction.
        .Speed = 4
    End With

End Sub

Private Sub contCrawl_Setup()

    'Fill the buffer. Normally, you would retrieve data from
    'your live feed here. You would then create and queue
    'still images and/or effects based on the retrieved data.

    'Draw new text to crLayer.
    DrawToLayer
    'Queue the Layer.
    contCrawl.QueueItem crLayer
    'Queue the Animation.
    contCrawl.QueueItem animFB
    'Draw new text to crLayer.
    DrawToLayer
    'Queue the Layer.
    contCrawl.QueueItem crLayer
    'Queue the Animation.
    contCrawl.QueueItem animFB
```

```
End Sub

Private Sub contCrawl_Waiting()

    'Fill the buffer. Normally, you would retrieve data from
    'your live feed here. You would then create and queue
    'still images and/or effects based on the retrieved data.

    'Draw new text to crLayer.
    DrawToLayer
    'Queue the Layer.
    contCrawl.QueueItem crLayer
    'Queue the Animation.
    contCrawl.QueueItem animFB

End Sub

Private Sub Start_Click()

    'Set up and show.
    contCrawl.Setup crawlCon
    contCrawl.Take

    '************************
    ' Form Maintenance

    'Disable the Start button.
    Start.Enabled = False

End Sub

Private Sub Stop_Click()

    'Stop immediately.
    contCrawl.Stop

    'Set LayerCount to 0.
    LayerCount = 0

    '************************
    ' Form Maintenance

    'Enable the Start button.
    Start.Enabled = True

End Sub
```

```
Public Sub DrawToLayer()

    'Increment LayerCount.
    LayerCount = LayerCount + 1

    'Draw new text to crLayer.
    With GlobCon
        'Clear the contents of the current Layer (crLayer).
        .Layer.Clear
        'Draw text.
        .MoveTo 10, 30
        .DrawString "Layer #" & LayerCount
    End With

End Sub
```

Appendix A

DVE Switcher

Details for creating DVEs.

DVE Switcher

The DVE Switcher utility allows you to create custom DVEs or use the preset templates. You can use the DVE Switcher to size and position live video input. Once you have created your DVE template, switch to Sequencer and select it from the drop-down list in the Templates tab to preview the DVE.

Open the DVE Switcher Utility

To open the DVE Switcher utility, select Start > Programs > Harris > G7 Utilities > Switcher App. .

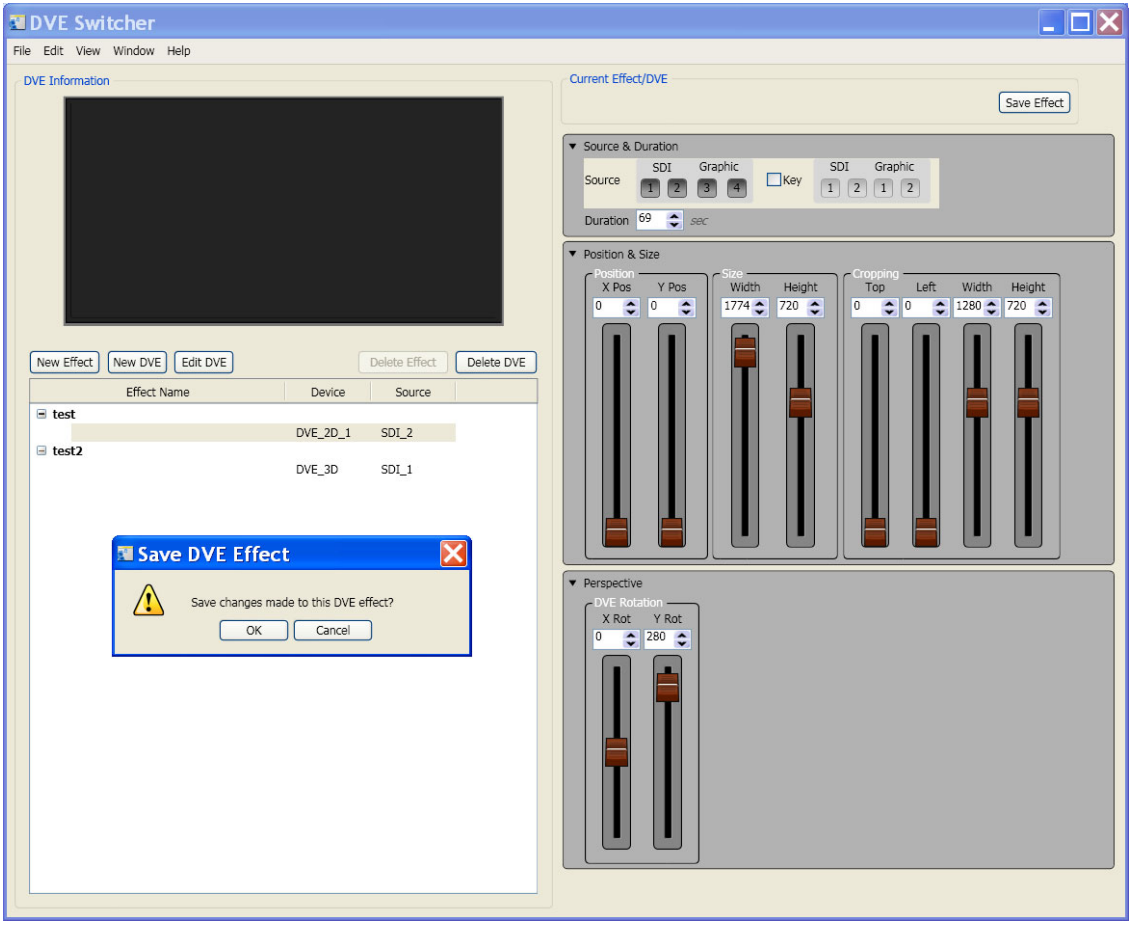


Figure 9-1. DVE Switcher Utility

Create a DVE Template

To create a custom DVE, complete the following steps.

1 Click the New Effect button. The Add New Configuration dialog opens.

2 Enter a descriptive name for the new DVE in the Configuration Name field. For example, 3D Over SD 1.

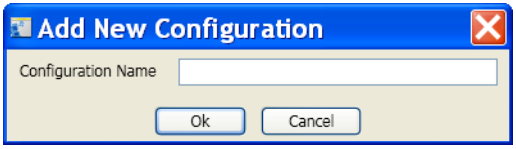


Figure 9-2. Add New Configuration Dialog

3 Select the new effect from the Effect Name list and click the New DVE button. The Add New DVE dialog opens.

4 Select 2D DVE 1, 2D DVE 2, or 3D DVE from DVE Device drop-down list.

Note: 3D DVE is only available if you purchased the optional 3D DVE daughter card for your Altitude Express video card.

5 Repeat steps 3 and 4 to define all the DVEs in your template.

Set the DVE Dimensions

To set the DVE dimensions, complete the following steps.

1 Select the DVE from the Effect Name list.

2 Click the dimension button for the selected DVE: Live Format, 1080i, or 720p.

Set the DVE Source, Duration, and Z-Order

To set the DVE source, z-order, and duration, complete the following steps.

1 Expand the DVE Effect in the Effect Name list, by clicking the [+] button beside the name.

2 Select the DVE Device in the expanded list.

3 Click the Edit DVE button to enable the Source & Duration options.

4 Use the Source buttons to select the source for the DVE: SDI 1, SDI 2, Graphic 1, Graphic 2, or Video 1.

5 Set the duration for the DVE in the Duration field. Time is measured in frames.

6 Set the z-order to determine the DVE and graphic layers, by clicking the appropriate Z Order button. There are seven available layers, with layer 3 at the top, and layer -3 on the bottom.

Figure 9-3. Z Order Options

7 Click the Save Effect button above the options to save your settings.

Position, Size, and Crop the DVE

To position, size, and crop the DVE, complete the following steps.

1 Expand the DVE Effect in the Effect Name list, by clicking the [+] button beside the name.

2 Select the DVE Device in the expanded list.

3 Click the Edit DVE button to enable the Position & Size options.

4 To set the DVE position, use one of the following options.

- Slide the X Pos or Y Pos faders.
- Enter a value in the X Pos and Y Pos fields.
- Click the up or down arrows.

5 To set the DVE size, use one of the following options.

- Slide the Width and Height faders.
- Enter a value in the Width and Height fields.
- Click the up or down arrows.

6 To crop the DVE frame, use one of the following options.

- Slide the Left, Width, Top, and Height faders.
- Enter a value in the Left, Width, Top, and Height fields.
- Click the up or down arrows.

7 Click the Save Effect button above the options to save your settings.

Rotate the DVE

If you purchased the 3D DVE option you can rotate the DVE. To rotate the DVE, complete the following steps.

1 Expand the DVE Effect in the Effect Name list, by clicking the [+] button beside the name.

2 Select the DVE Device in the expanded list.

3 Click the Edit DVE button to enable the Perspective options.

4 To set the DVE rotation, use one of the following options.

- Slide the X Rot or Y Rot faders.
- Enter a value in the X Rot and Y Rot fields.
- Click the up or down arrows.

5 Click the Save Effect button above the options to save your settings.

Delete the DVE

You can delete a single DVE device, or the entire effect.

- To delete a single DVE device, expand the DVE Effect and select the DVE device from the expanded list. Click the Delete DVE button.
- To delete the entire effect, select the Effect name and then click the Delete Effect button.

Apply the DVE Template in Sequencer

When you save the DVE, the DVE template is automatically available in Sequencer on the DVE Template tab.

You can use the DVE Template tab to apply a DVE template to individual events in the Sequencer playlist. The DVE Template tab includes a list of preset and custom DVE templates.

1 In Sequencer, select an event in the playlist. You will apply the DVE template to the selected event.

2 Switch to the DVE Template tab.

3 From the Template Name list, select the DVE template you want to apply.

Glossary

.eps file

The most common form of a vector-based image. Objects in vector-based images are described mathematically, based on various specified points, such as the four corner points of a rectangle.

.icg file

Legacy file format for individual layouts. Replaced by .scribe file format in TitleOne 5.0.

.ins file

Legacy file format for playlist files. Replaced by .scribelist file format in TitleOne 5.0.

.ipt file

An Inscriber image format for files created in Paint. .ipt files are 32-bit and contain alpha information.

.lgo file

An Inscriber image format for I-, I6-, or 32-bit images with alpha.

.scribe file

File format for individual layouts created in TitleOne 5.0 or later. Contains the layout details, animation data, ODBC connections, and transitions information.

.scribelist file

File format for saved playlists created in TitleOne 5.0 or later. Contains the playlist details including layout details, sequencing, Media Store files, and output information.

.via file

ViaBuilder – The file format of your single animation file. ViaBuilder takes the imported animation sequence and creates the .via file. You can import .via files in TitleOne.

2D

See Two-Dimensional Space.

3D

See Three-Dimensional Space.

A

Absolute Position

Animation – A motion template option that ignores the placement of the selected path and uses the position set in the template instead.

Active Texture Treatment

CG – Applies a moving image to text or graphic objects. They are usually looped video clips which

add texture and motion to several objects in a layout.

You must have the Clip Option activated on your system before you can use Active Textures.

Adaptive Field Filters

CG, Paint, and Frame Grab – Video clean-up filters that modify the luminance numbers for each pixel on even- or odd-numbered scan lines based on the luminance numbers for the pixels directly above and below.

AES

Audio Engineering Society. AES is a professional organization that recommends standards for the audio industries.

Alpha

Transparency in video images. In Paint, the alpha channel contains all of the details on the video transparency of the image.

See also Transparency.

Alpha Adjustment Filters

Paint – Inscriber filters that allow you to manipulate the video transparency of your images.

Alpha Background Pattern

See Video Transparent Pattern.

Alpha Channel

Paint – The channel that defines the visible and transparent areas of images used in TitleOne. Paint allows you to modify the image alpha channel.

Alpha Mask

Sequencer – Uses a video file or image as a mask over the event during output. The event displays through the alpha of the selected file.

Alpha Memory

When you edit a file in Paint, the original alpha channel is not destroyed when you modify the alpha information. Using the Alpha Memory tools, you can restore all or a portion of the original alpha channel.

Alpha Memory Tool

Paint – Tool that allows you to restore all or a portion of the original alpha channel of an image. This is possible because the original alpha channel is not destroyed when you modify alpha information in Paint.

Alpha Texture

Paint – A type of texture applied to the alpha channel instead of to the image.

Alpha Tools

Paint – Tools used to add alpha to an image. Tools include Alpha Add and Subtract, Alpha Fill, and Alpha Gradient.

Anamorphic

Process that horizontally squeezes a 16:9 HD image so that all the pixels are visible in the 4:3 SD space. The image is then stretched horizontally when outputting to 16:9 SD, resulting in a clearer and sharper picture.

Animation

CG, Animation, and Sequencer – A type of CG layout or effect event. From CG, layouts are

imported into Animation to move the text and graphic objects around in virtual 3D space, then output in Sequencer.

Animation Editor

TitleOne module that takes two-dimensional CG text and graphics and creates three-dimensional animations.

Animation Settings

CG – A dialog that determines how CG objects are sent in the FX workspace. For each layer in a CG layout, select As Lines, As Characters, or As Single Object. To send the background to Animation, click the Export Background checkbox.

Animation Transition

Sequencer – Displays a still event using the selected animation file as a transition. The transition duration is determined by the length of the animation.

See also Transition.

ANSI Fonts

A standard arrangement of alphanumeric characters within a font. All ANSI fonts identify characters with three digit numbers ranging from 000 to 255.

ANSI Identification Numbers

Three digit numbers, ranging from 000 to 255, used to identify specific characters in ANSI fonts. A character usually has the same number in all fonts. For example, "a" is ANSI character 097 and "®" is ANSI character 174. Use the Windows Character Map or the CG Character Map to find identification numbers.

Anti-Aliasing

Removes or avoids the jagged edges on curved and diagonal lines in text or graphic objects. Anti-aliasing works by interpolating pixels of an intermediate color along the edges of an object. CG characters and various Paint tools use anti-aliasing.

As Characters

CG – An animation setting that determines how items on a layer are grouped when imported into Animation. As Characters puts each character in a word on a separate spline path in Animation.

As Lines

CG – An animation setting that determines how items on a layer are grouped when imported into Animation. As Lines puts each word or object on a separate spline path in Animation.

As Single Object

CG – An animation setting that determines how items on a layer are grouped when imported into Animation. As Single Object flies all objects and words in a layout on a single spline path.

Aspect Ratio

The relationship between the width and height of an image. Standard televisions have an aspect ratio of 4:3 (4 units wide by 3 units high). Widescreen television have an aspect ratio of 16:9.

ATVista

A brand of frame buffer.

Automatic Live Updates

A Program/Preview palette setting that automatically sends any changes you make directly

to the channels enabled for live updates. You can set the updates for the Program and Preview channels.

Auto Text

Text strings that can be quickly inserted into a layout using RapidFire.

Average Field Filters

CG, Paint, and Frame Grab – Video clean-up filters that compute new data for even- or odd-numbered scan lines by averaging each scan line with the line above.

Axis (X, Y, or Z)

Animation – An imaginary line that passes through an object and about which the object turns. There are three axes Animation – X (width), Y (height), and Z (depth).

B

B1 Folio

See Browse Folio.

Background

CG – A pattern, color, image, or incoming video signal. Foreground objects, such as text and graphics, are placed on top of the background.

Paint – Images created in Paint, to be used in CG behind other text and graphic objects.

See also Collage.

Background Color

CG and Paint – Color used as a secondary color for gradients. You can also use the background color as a secondary color choice when applying color to an element. If you hold down the ALT key, the background color is applied instead of the face color.

Balanced Audio

Balanced audio is a method of minimizing unwanted noise from interference in audio cables. The idea is that any interference picked up in a balanced cable is eliminated at the point where the cable plugs into the audio equipment.

Balanced audio works on the principle that two identical signals which are inverted 180° out of phase will cancel each other out. This method of transmission is designed for long cable runs.

Baud Rate

A measure of the speed of data transmission between computer and other devices, measured in bits per second. Typically, the baud settings of two devices must match if the devices are to communicate with one another.

Best Lossless Compression

Media Store – A compression option that tries both LZW and VII methods, and then applies the one with the best compression or no compression. The result is the smallest possible image size without losing data.

See also Compression, LZW Compression, and VII Compression.

Bias

Animation – A spline property that refers to the spline path coming into or out of a keyframe. Adjusting the bias makes motion more dependent on one direction than the other.

See also Spline.

Bitmap

An image file format that describes the position and color number of each of its pixels. These pixels are arranged in a grid, or raster. Since a bitmap is defined by the number of pixels it contains, increasing its size can distort the image. Bitmaps are also known as raster images.

Bitrate

The speed at which bits are transmitted or processed, measured in bits per second (bps). The higher the bitrate, the more data that is processed and, typically, the higher the picture resolution.

Blue Channel

Paint – The channel that stores all of the blue information in an image.

Blur Filter

CG, Paint, Animation Editor, and Frame Grab – A distortion filter that mildly blurs the frame grab, object, or texture it is applied to with a 3x3 convolution filter.

Contrast with Sharpen Filter.

Borders

Sequencer – Sets the output area for rolls and crawls. During playback the roll/crawl displays within the set border.

Browse Folio

Media Store – The folder that contains the media files from the directory you are currently browsing. It can be accessed by clicking the BI button on the Media Store toolbar in browse mode.

Contrast with Global Browse Folio.

Browse Mode

Media Store – The Media window displays the media files from the folders you have browsed on local, network, and removable drives. The Media Store toolbar provides access to folios of browsed files.

Contrast with Database Mode.

Browse Set Folio

Media Store – A temporary location for holding media files from the most recent Media Store search in browse mode.

Brush-Based Tools

Paint – Tools that let you use brush attributes to perform non-painting tasks, such as cloning or alpha memory. All of the settings from the Brush tab are used by brush-based tools.

Brush Styles

Paint – Brush tab settings that control the appearance of Paint tool strokes. The Hard-Edge style applies the tool as if it were a pencil. The Soft-Edge style applies the tool as if it were a brush. The Soft-Edge Buildup style applies the tool as if it were an airbrush.

Build Folio

Media Store – The folder that contains browsed media files to be added to a Media Store database. You can access the Build folio (also called the Build set) by clicking the Build button on the Media Store toolbar.

Build List

Media Store – The list of image files in the Build dialog waiting to be added to the Store database.

C

Cache

A specialized area of memory that improves a computer's performance by storing frequently accessed information.

Calibration

The process of matching the output on your computer monitor to your video output so that colors look the same on both monitors.

Canvas Size

Paint – The size of your painting area. Your canvas size can be larger or smaller than your image size. If your canvas size is smaller than your image size, some of the image is clipped. If your canvas size is larger than your image size, an empty area appears around the image.

See also Image Size.

Capture

Frame Grab – An action that allows you to capture a frame from a video feed.

Center Cut

A method used to crop the original I6:9 widescreen image so it will fit a standard 4:3 television monitor. As a result, the left and right sides of the image are cut off, and only the center is visible.

CG

TitleOne module that acts as a full-featured character generator, allowing you to create still, roll, crawl, and animation layouts for display to video. CG layouts can also be exported to FX for 3D effects.

Channel

Paint – The storage location for color and transparency information in an image. Each layer in an image has four channels: red, green, blue, and alpha. Each channel stores information about one aspect of the image. The red, green, and blue channels store all of the color information for the image. The alpha channel stores all of the transparency information for the image. Individual channels are represented by monochrome images.

Character Generator

See CG.

Chroma Antialiasing Filter

Paint – A video clean-up filter that smooths image features that cause flickering bands of false color (due to color signal encoding in NTSC) during broadcast.

Chrominance

Amount of pure color. Chrominance works in conjunction with luminance, which is the shade or value of the color. For example, when you look at a red ball your eyes do not see it as having many colors but as having many shades of red. The red you see is the chrominance of the ball and the shades of red are the different luminance values.

Clean-up

Paint – The process of using Paint tools and filters to add alpha and make other corrections to a logo or image.

Clip Art

Images commonly available from third-party sources that can be quickly inserted into an image.

Clip Objects

CG – Full resolution, uncropped video clip objects. You must have the Clip Option enabled on your system before you can use clip objects.

Clock Objects

CG – Pre-defined RTX applications you can use to add digital clocks and digital timers to layouts.

CLR button

A Program/Preview palette button that clears the current channel.

CMYK

An acronym for Cyan, Magenta, Yellow, and Black. All printed images are a combination of these four colors. CMYK is not relevant to video display, but computer-generated images must be converted to CMYK if they are to be printed.

Collage

Paint – An image technique that combines and blends multiple images into one smooth composition.

Color Adjustment Filters

Paint – Inscriber filters that alter image color by mapping new ranges of pixel values over existing ranges.

Color Balance Filter

Paint – A color adjustment filter that adjusts the color range of an image's shadows, midtones, and highlights one at a time.

Color Chip

CG and Paint – A small colored square on the Color & Texture tab in CG or the Color tab in Paint that identifies a selected color.

Color Correction

Paint – A means of adjusting the color of an image. Paint has several color correction filters that let you perform complex adjustments to the color of an image.

Color Emboss

Paint – A distortion filter that makes an image appear embossed by adding highlights and shadows based on the edges in the images, while retaining color information.

Color Model

A mathematical representation of the full set of colors available for NTSC or PAL encoding, such as the RGB, HSV or HLS color models. While the colors they represent remain the same (that is, yellow remains yellow), the method they use to represent those colors may differ.

See also RGB Color Model.

Color Picker

Paint and CG – An eye-dropper tool that copies colors from anywhere on the screen.

Complex Search

Media Store – A Media Store search using multiple keywords and operators.

See also Simple Search.

Component Video

Video comprised of multiple signals. It is usually taken to mean that there are separate signals for chrominance and luminance. RGB is also a component signal, with separate signals for red, green, and blue pixel numbers.

Composite Image

Paint – An image where all of the information is placed on a single layer and cannot be separated. You can create images with multiple layers, but they are converted to composite, or single layer, images when you take them into another TitleOne module.

See also Merge.

Composite Video

Video comprised of a single signal for luminance and chrominance numbers.

Compression

Media Store – Reduces the size of a database image, typically by removing redundant information. Some types of compression can affect the quality of the compressed file.

See also Best Lossless Compression, HKF Compression, LZW Compression, and VII Compression.

Continuity

Animation – A spline property that refers to the smoothness, whether sharp or exaggerated, of the spline path as it moves from one keyframe to another.

See also Spline.

Control Point

CG – Point on a polygon or spline that changes its shape. A single spline or polygon can contain up to 64 control points. Polygon control points define its boundaries while spline control points define tangents to the curve.

Corner Logo

A logo found in a corner of the screen, generally for the purposes of corporate identification or program rating. Corner logos are also known as video bugs.

Crop Filter

Animation – A motion filter that cuts off or reveals a percentage of an object over time. You can set a different crop number for each side of an object.

D

Database Mode

Media Store – The Media window displays media files from the current Media Store database. The Media Store toolbar provides access to folios containing media files from the database.

Contrast with Browse Mode.

Defined Shot Box Buttons

See Predefined Media.

Delay

Animation – A set number of frames an animation stops and holds its position at the current frame before continuing along the path. Set in the Pause field to the left of the Animation tabs. Also known as Pause.

Depth Element

CG – An element that extends away from the object at an angle, giving it the appearance of thickness and depth.

DigiMix

A brand of frame buffer.

Digital Store

See Media Store.

Display Latency

The lag time between first accessing a rendered file and having it appear on screen. Latency is caused by the time required to read rendered files from disk or from a remote location, the time to decompress files, and the time to transfer files to the frame buffer card. Display latency varies from system to system, and with network activity level.

Display Options

Animation – Options on the Go menu or Animation palette that change the view of the FX workspace. Display options include All Paths, Text Outline, Snapshot of All Objects, and Snapshot of Selected Object.

Distort

CG – An effect that changes the face shape of individual text characters along the X and Y axes. Available with all type styles except Classic Inscriber.

Distortion Filters

Paint – Inscriber filters that let you apply special effects to your images to give the impression of distortion or a different medium.

Dither Filter

CG and Frame Grab – A filter that removes contouring in imported graphics with a generalized noise filter.

Dodge Tool

Paint – An image-editing tool used to lighten an image by moving pixel color values towards their maximum.

Downconvert

The process of converting a higher resolution image or input signal to a lower resolution. For example, a high definition 1080i signal is downconvert to standard definition 480i.

Drop Frame

A method of adjusting the 30 fps (frame per second) NTSC timecode to approximately 29.97 fps. This correction drops 108 frames per hour by skipping frame counts 0 and 1 at the beginning of each minute, except minutes 0, 10, 20, 30, 40, and 50.

DVE (Digital Video Effect)

Sequencer – An option that sizes and positions live video during output by applying single-channel digital video effects to your events.

On output the live video plays in two locations: the DVE window on top of events, and full-screen in behind the event. Apply an opaque background to the event in CG so you do not see the live video in behind.

DVI (Digital Visual Interface)

This is a high-bandwidth video connection that carries digitized picture information.

The DVI port provides a pure digital video signal to a digital flat-panel display to ensure the highest quality picture.

E

EAS (Emergency Alert System)

A broadcast warning system that either interrupts normal broadcasting, or displays an alert which crawls across the video picture. EAS alerts also contain an audible alert message

Ease In/Out

Animation – Settings on the Spline tab that determine the speed of a path coming into or out of a keyframe.

Edge Element

CG – An element that completely surrounds the face of an object. You can add an unlimited number of edges to an object, and they can either overlap the face or extend beyond the face.

Element

CG – Every object consists of four different elements: a face, one or more edges, a depth, and a shadow. In most cases the elements can also include a sheen.

Apply treatments to elements to change the appearance of the elements.

Embedded Audio

Digital audio that is multiplexed (combined) into a serial digital video signal.

Embellishments

CG – An object's edge, depth, and shadow elements.

Emboss

Paint – A distortion filter that makes an image appear raised or embossed by adding highlights and shadows based on the edges in the image. Color information is suppressed.

Event

Sequencer – A layout that displays in the Sequencer Playlist. Events include the layout details, as well as transition, timing, and output information.

Event Duration

Sequencer – The total time it takes to play an individual event. Event duration is dependant on the trigger type selected for the group. You can set a duration for events triggered by Timed, Time Code, and PC Clock trigger types.

Operators control the event duration manually for the Manual and GPI triggers.

Event List

See Sequencer Playlist.

Eye-Dropper

See Color Picker.

F

Face Element

CG – The actual shape of the object. It is the top element of the object unless it is overlapped by one or more inside edges.

Field

One half of a complete video frame. A field contains every second horizontal scan line in an image, either all odd scan lines or all even scan lines. Two fields make a complete video frame.

See also Interlaced Scan.

Field Filters

See Video Clean-up Filters.

Fill Pattern

See Video Transparent Pattern.

Filters

CG, Paint, and Frame Grab – Filters that operate on the interlaced fields in a captured image are known as video clean-up filters. Other filters that manipulate, modify, and refine your image in complex ways include alpha adjustment filters, color adjustment filters, distortion filters, and legalize filters. Alpha filters work only on one channel of an image, while the others affect the entire image. Not all filters are available in all modules.

Animation – An algorithm that changes the appearance of a keyframe as it moves through time. Filters in Animation Editor include Transparency, Crop, Mosaic, Blur Luminance, and Tint.

See also Photoshop Filters and Third-Party Filters.

Flyout Menu

Paint and CG – Some buttons on the Tools palette contain flyout menus with additional tools. Buttons with flyout menus are identified by a small black arrow in the bottom right corner. The flyout menus appear when you place the pointer on top of a tool and hold down the left mouse button.

Folio

Media Store – A subset of a Media Store database, or the browsed media files. In database mode, you can use folios to organize Media Store media files into sets based on specific criteria, such as media type, job, or client. Adding a media file to a folio only creates a reference from the Global folio; the media file is not duplicated. Folios include the Set folio, Local/System folios, Build folio, and Browse folio.

Font Manager

CG – An application that builds and maintains the Inscriber font database. You can use the Font Manager to convert True Type fonts to Inscriber fonts.

Footprint Removal Field Filters

CG and Frame Grab – Video clean-up filters that combine the average field filters and adaptive field filters. First, the average field filter is applied to the selected field, then the adaptive field filter is applied to the other field.

Frame

Animation – A point along a spline path, indicated by a small square between keyframes. Frames are also referred to as "in-between".

See also Keyframe and Video Frame.

Frame Buffer

A hardware card that stores frame information and then outputs it to video. Inscriber products interact with the frame buffer to add information

to the video frame stored on the frame buffer to create complex effects.

Frame Grab

TitleOne module that captures individual frames from a video feed. The image can be filtered in Frame Grab, and then added to the Scrapbook, used as a background for layouts, or edited in Paint using a variety of tools and filters.

G

Gamut

The available colors that can be displayed on a particular device (video output or computer monitor). The RGB color gamut describes the colors available in video and on the computer. Orange and yellow colors are in limited supply in the RGB gamut, making it difficult to select variations of yellow and orange.

Gaussian Blur

Paint – A distortion filter that softens an image by applying a weighted average (along a Gaussian or bell-shaped curve) of the pixels where significant color transitions occur.

GIF (Graphics Interchange Format)

A computer graphics file format for compressing graphic images. GIF compression is lossless, supports transparency, but allows a maximum of only 256 colors.

Global Browse Folio

Media Store – The folder that contains all the media files from all the directories you have browsed. It can be accessed through the globe icon on the Media Store toolbar in browse mode.

Contrast with Browse Folio.

Global Folio

Media Store – The folder that contains all the media files in a Media Store database and that is available to all users on the network. After you create a database, the Global folio is the default folio when launching G-Scribe. You can access the Global folio through the globe icon on the Media Store toolbar in database mode.

GPI (General Purpose Interface) Trigger

Sequencer – A simple electro-mechanical cueing trigger that uses a contact closure.

GPI Trigger Type

Sequencer – A group trigger type. Waits for an operator to press the external GPI button to trigger the next event. The current event remains on-screen until the next event is triggered.

Gradient

CG and Paint – A blend from one color to another, or from one level of transparency to another.

Graphic Object

CG – For adding colorful shapes behind text, such as lower thirds and panels. Can be simple shapes such as ovals, rectangles, wedges, and arcs. Polygons and splines are more complex graphic objects.

Graphics Tablet

A device for controlling the cursor, used instead of a mouse. A pen is used as a drawing device on the

tablet, and pen motions are translated into cursor movement on the interface. Unlike a mouse, a graphics tablet is pressure-sensitive.

Grayscale

An image that is represented by up to 256 shades of gray. In a grayscale image, every pixel has a brightness number ranging from 0 (black) to 255 (white). The monochrome filter converts a color image to a grayscale image.

Green Channel

Paint – The channel that stores all of the green information in an image.

See also Channel.

Group

Sequencer – One or more events organized into categories. Groups display in the Sequencer playlist, starting with a group header and followed by the group's events. Trigger types are applied to the entire group.

GUI (Graphical User Interface)

See Interface.

H

Hardware Acceleration

Sequencer – A checkbox on the Renderer tab that applies to animation events. The option allows you to broadcast your animations in real-time without having to render them to a .via file first.

HDTV (High Definition Television)

HDTV is a digital television format where the broadcast transmits a signal with a much higher resolution and a wider aspect ratio than standard NTSC analog television signals. The HDTV aspect ratio is 16:9.

High Quality (HQ) Processing

Creates smoother curves and diagonal lines for Inscriber font characters at large font sizes in CG.

HKF Compression

Media Store – A compression method that achieves at least 10:1 compression on 16- and 24-bit images. HKF is a loss compression method, and you may see some distortion upon decompression. 32-bit images lose the alpha channel when HKF is used.

See also Compression.

HLS Color Model

A color model that describes colors in terms of hue, lightness, and saturation. Hue numbers range from 0 to 359 degrees, arranged in spectrum order from red through blue to magenta. Saturation determines the brightness of the color with a maximum value of 100%. Lightness describes how close the color falls to pure black or white. White has a lightness number of 100% and black has a lightness value of 0%.

Horizontal Flip Filter

CG, Paint, and Frame Grab – An image filter that flips the image left to right. In Paint, the horizontal flip filter is accessed on the Transform tab.

HSV Color Model

A color model that describes colors in terms of hue, saturation, and value. Pure colors (hues) are

measured in degrees, from red at 0 degrees through blue to magenta at 359 degrees.

Decreasing the saturation without changing the value is the same as adding white pigment to a pure color. Decreasing the value without changing the saturation is the same as adding black pigment to a pure color.

Hue

A numeric representation of a pure color in a particular color model.

I

Illegal Colors

Paint – Colors that force a color system to go outside its normal bounds. Usually these are the result of electronically painted images rather than direct video outputs. For example, removing the luminance from a high intensity blue or adding luminance to a strong yellow may produce illegal colors.

Illuminator Pro

A brand of frame buffer.

Image

CG – Images can be used as logos, textures, and backgrounds.

Media Store – Any image browsed, imported, captured, or residing in a Media Store database.

Animation – You can fly images around in 3D space.

Frame Grab – You can grab an image from a video feed.

Paint – You can add alpha to an image or create a new image.

Image Alpha

See Alpha Channel.

Image Attributes

A list of characteristics about a source file, such as its resolution, file size, name, and keywords.

Image Capture

See Frame Grab.

Image Channel

See Channel.

Image File Format

The particular storage format for image information. TitleOne can import images stored in most common bitmap formats.

Image Filters

Filters that operate on the alpha and color channels of an image.

See also Filters.

Image Resolution

The size and color depth of the source file.

Image Size

The actual size of an image. Your image size can be larger or smaller than your canvas size. If your image size is larger than your canvas size, some of the image is clipped. If your image size is smaller than your canvas size, an empty area appears around the image.

See also Canvas Size.

Image Thumbnail

A small, rendered bitmap representing a layout, event, or other full-size image. A thumbnail is used to give a good representation of what a source file looks like without producing a high quality image. Thumbnails are used for preview purposes and image selection.

In Point

Sequencer – The point specifying when Sequencer starts the playback of the event.

Insert Keyframe (Before, After, At)

Animation – An option that determines where a keyframe is inserted in the spline path. "Before" inserts a keyframe before the selected keyframe. "After" inserts a keyframe after the selected keyframe. "At" inserts a keyframe at the current frame, as indicated in the Current Frame field on the Preview toolbar.

Interface

The commands and graphical display formats provided by a computer program that allow you to communicate with and use the program. Inscriber uses a graphical user interface (GUI) to provide a picture-oriented way of interacting with the program.

Interlaced Scan

A system of video scanning where an image is split into odd- and even-numbered horizontal scan lines, which are transmitted in rapid succession as two separate fields slightly offset in time.

Compare to Progressive Scan.

Interpolate Field Filters

CG, Paint, and Frame Grab – Video clean-up filters that compute new data for even or odd numbered scan lines based on the scan lines directly above and below.

Interpolation

Animation – Determines intermediate numbers between existing numbers. Interpolation occurs from one keyframe to the next as the program determines the smoothest or most accurate path coming out of the first keyframe and into the second keyframe.

Invert Color Filter

Paint – A color adjustment filter that inverts the value of each component (HSV, RGB, or HLS) of the colors in your images. The new values are equal to the full-scale value of each component minus the original value.

Invert Key Filter

Paint – An alpha adjustment filter that reverses the opaque and transparent areas of your image. For example, if an area is 80% opaque and 20% transparent, it becomes 20% opaque, 80% transparent.

Ittest.exe

A program provided with TitleOne that allows you to use the Inscribe.ini settings to verify whether TitleOne should be seeing the time codes.

J

Job

The entire .scribelist file, including all transition and effect events, trigger and timing information. The current job is always displayed on the Play list, or job strip, and in the Event List in Sequencer.

Job Creator

CG – Creates a multi-layout playlist, using a formatted text file to load and fill existing templates.

K

Key

The alpha signal as seen on the video output monitor.

See also Alpha.

Keyframe

Animation – A significant point in an animation that instigates a change in the rotation, position, or attributes of the current path.

See also Frame.

Keyframe Marker

Animation – Keyframe markers appear as small diamonds on the Track Slider for each path. You can change where a keyframe occurs in the path by clicking on the keyframe marker and dragging to the left or right to change its location.

Keyword

Media Store – A descriptive word tagged to a media file, used for searching and sorting purposes.

L

Layer

CG – A level of the CG workspace that allows you overlap text and graphic objects. There are 10 main layers, with each main layer divided into separate text and graphic planes. Text planes always appear on top of their respective graphic planes.

Paint – A level of the Paint workspace that allows you to overlap images. Each paint layer is an image layer, with its own set of image channels. There is no limit to the number of Paint layers allowed.

Layout

CG – The overall appearance of an image created in CG, consisting of objects which you customize and position.

Layout Tree View

CG – Displays all of the objects in a layout and allows you to select them, change their z-order, lock them, duplicate them, and delete them.

Leading

CG – The space between lines of text in a layout. Leading is measured from baseline to baseline.

Learn Mode

Sequencer and Media Store – A function that automatically creates a playlist from the media file numbers that you enter into the Shot Box palette Number field. You can switch to learn mode by clicking the LRN button on the Shot Box palette.

Legal Colors

Paint – Video safe colors for NTSC or PAL that contain RGB values that fall in the middle of the 0 to 255 range.

Legalize Filters

Paint – Inscriber filters that convert illegal colors (image colors outside the broadcast range) to legal colors (colors within the broadcast range). If colors are not legalized before they are broadcast as an NTSC or PAL signal, they will produce inferior results and possibly even technical problems.

See also Video Legalize Filter.

Length of Path

Animation – The number of frames that an object takes to complete the spline path.

Level Curves Filter

Paint – A color adjustment filter that adjusts the tonal range of an image at any point along a 0-255 scale. This allows for smoother adjustments to the tonal value of an image, replicating high-end color correction systems.

Levels Filter

Paint – A color adjustment filter that makes gradual adjustments to the brightness, contrast, and midtones of an image.

Lightness

An element of the HLS color model. Lightness determines the brightness or darkness of a color. A lightness value of 0% is black; a value of 100% is white. For maximum saturation, lightness must be set to 50%.

Linked Events

Events that are taken to air simultaneously.

Live Video

Sequencer – When used with the DVE option, you can size and position the live video output.

See also DVE.

Live Video Button

Frame Grab – Switches to the online monitor to view the video signal.

Local Disk Render

Sequencer – Renders the event as a file on your local hard drive. Image display latency depends on local drive access speed and image size.

Local Folios

Media Store – Collection folios associated with an individual Windows user, and which cannot be accessed by other users. G-Scribe checks your Windows logon name to determine which local folios to display in Media Store.

Contrast with System Folios.

Local/System Toggle Button

Media Store – Cycles between Local collection folios that are private to each user and System collection folios that can be accessed by all network users.

Locked Path

Animation – A Time tab option that locks a spline path in place and prevents you from editing or moving its position, or the position of individual keyframes in the path.

Log Event

Sequencer and Media Store – Options from the Playlist menu that add an event to a sequence or playlist. Log Event Down adds an event below the current event; Log Event Up adds an event above the current event.

Logo Object

CG – Special graphic objects that can mix the face treatment with a bitmap image. Commonly used for station identification images, corporate logos, or product logos.

Luminance

The shade or value of a color. Luminance works in conjunction with chrominance, which is pure color. For example, when you look at a red ball your eyes do not see it as having many colors but as having many shades of red. The red you see is the chrominance of the ball and the shades of red are the different luminance values.

Luminance Fill

Paint – A painting tool that fills a layer or selection based on color values in the image. You can specify in the Tolerance field how close color values need to be in order to be filled in.

Luminance Filter

Animation – A motion filter that adjusts the brightness and contrast of an object over time. You can use luminance as a lighting effect where light moves from one object to another over time.

LZW Compression

Media Store – A lossless data compression scheme suitable for all image file formats.

See also Compression.

M

Manual Trigger Type

Sequencer – A group trigger type. Waits for an operator to press the SPACEBAR to trigger the next event. The current event remains on-screen until the next event is triggered.

Mark In and Mark Out Points

Sequencer and Media Store – The points that mark the first and last frames of a clip to be played in a sequence.

Marquee

Paint – The dotted line that denotes a selection boundary.

See also Selection.

Media File Attributes

A list of characteristics about a source file, such as its resolution, file size, name, and keywords.

Media File Thumbnail

A small, rendered bitmap representing a layout, event, or other full-size media file. A thumbnail is used to give a good representation of what a source file looks like without producing a high quality image. Thumbnails are used for preview purposes and media file selection.

Media Library

CG – A collection of images, video clips, clocks, and Ports. Used to quickly transfer media between layouts and to create a collection of common layout items.

Media Number

Media Store – A unique number assigned to each media file when it is browsed or added to a Media Store database.

Media Store

Module that is a searchable database of still images, clips, and animations that can be used in other modules.

Media Window

Media Store – The window displaying thumbnail images from the Media Store folios.

Merge

Paint – Composites or combines selected layers in an image into a single layer. Merge Up and Merge Down merge the current layer with the one above or below it; Merge Visible merges all layers currently visible on screen; Merge All merges all the layers in the image.

Monochrome Filter

CG, Paint, and Frame Grab – A color adjustment filter that performs a luminance conversion. Images are converted to 8-bit grayscale.

See also Grayscale.

Monochrome Logo

An export option in Paint to save a monochrome 1-bit logo.

Mosaic Filter

Animation – A motion filter that makes an object appear more pixelated or less pixelated over time. This filter is often used to blur out a person's face to disguise their identity. Mosaic width and height numbers range from 0 to 100.

Motion Path

Animation – A sequence of points along a spline that an object goes through to create movement.

Motion Template

Animation – Preset motion effects that you can apply to any text or graphic object. Motion templates include position, filter, spline, and timing information for each keyframe in the path.

Motion Template Registry

Animation – A library of preset motion effects that you can apply to existing paths.

Multiple-Board System

A system with more than one frame buffer.

Multi-Page Crawls

A single crawl created from multiple events. The output plays as a smooth continuous crawl, but each page is actually an individual event in the Sequencer Playlist. Creating multi-page crawls requires both the CG and Sequencer tools.

Multi-Page Rolls

A single roll created from multiple events. The output plays as a smooth continuous roll, but each page is actually an individual event in the Sequencer Playlist. Creating multi-page rolls requires both the CG and Sequencer tools.

N

Native Resolution

The number of physical pixels a television or monitor is designed to display . For example, the native resolution of an SD image is 720x480, and HD has a native resolution of I920xI080 or I280x720.

News Edit

CG – A dialog which allows the quick update of layout text with commonly used names, places, or other text. Also allows you to connect text objects to external data sources.

Noise Filter

See Dither Filter.

Non-Keyed Cuts

Cut transitions without a key or alpha channel.

Non-Repeating Textures

Non-repeating textures are good for backgrounds and other large objects, since they do not have to be tiled or otherwise duplicated.

Non-Tab-Constrained Line

See Anchored Text Line.

NTSC (National Television Standards Committee)

One of several standards developed for television broadcast transmission and reception. An NTSC television image has 525 horizontal scan lines per video frame, with each frame transmitted at 30 fps (frames per second).

Contrast with PAL.

O

Object

CG – Layouts are made up of objects which are customized and positioned within the workspace. Layouts can consist of clip, graphic, logo, Port, and text objects.

Offline

A state that is suitable for creating and editing layouts in TitleOne. If you take an event when working offline, the event is not pre-rendered and a delay occurs while TitleOne renders the event for output.

Offline Take

A take made while TitleOne is offline.

Online

A state where all events are pre-rendered and ready for immediate output. You must be online to access the output options on the Run tab in Sequencer.

Online Folders

Sequencer – The location where TitleOne places your rendered events before playing them. The folder uses the same name as your playlist.

For example, if your playlist is called MorningShow.ins the online folder is called morningShow.OnlineFiles.

Online Manager

A TitleOne application that renders all events before going online.

Online Output Directory

The folder or folders where all rendered events for the current sequence are stored.

Online Take

A take made while TitleOne is online.

Online Toggle Button

Switches between offline and online modes.

Opacity

CG and Paint – The degree to which background information cannot be seen through a graphic object, text, or image. An object with 0% opacity is transparent; an object with 100% opacity is completely opaque (you cannot see through it).

Operator

Media Store – A wildcard character (such as * or ?) or a word (such as AND, NOT, or OR) used in complex search strings to find media files in a Media Store database.

Out Point

Sequencer – The point specifying when the current event ends and when Sequencer takes the next event.

Overlay

TitleOne utility that allows you to insert and hide clocks, timers, stills, animated logos, and other events. You can control three additional layers of graphics on top of your current output using the Overlay utility.

Over-the-Shoulder Graphic

An image or collage that appears above a reporter's shoulder during a newscast. Over-the-shoulder graphics are a type of DVE.

See also DVE and Collage.

P

Page Formatted Crawls

See Multi-Page Crawls.

Page Formatted Rolls

See Multi-Page Rolls.

Paint

TitleOne module that lets you create, edit, retouch, and add alpha to bitmap images and Paint files.

Paint File Format

See .ipt.

PAL (Phase Alternating Line)

Video broadcast standard used in Europe and much of the world. A PAL television image has 625 horizontal scan lines per video frame, with each frame transmitted at 25 fps (frames per second).

Contrast with NTSC.

Path

Animation – The sum of the points along which an object moves in an animation. The path includes all keyframes and frames.

PC Clock Trigger Type

Sequencer – A group trigger type. Uses the system clock to trigger events. When the system clock reaches the event in point, the event is triggered.

Personal Folios

See Local Folios.

Perspective

Paint – An element of drawing on a two-dimensional surface so that objects give the impression of relative position, size, and lighting angles. Perspective can be applied to an object in Paint by using the Freeform tool or Depth fields on the Transform tab.

PGM Button

A Program/Preview palette button that sets automatic online updates for the current Program channel.

Photoshop Filters

Paint – Filters associated with Adobe Photoshop. These filters can be used in Paint, along with standard Inscriber filters.

See also Filters and Third-Party Filters.

Pickle Device

See GPI Trigger.

Pixel

A single sample of picture information. Pixel is short for "picture cell".

Pixel Shape

The shape of a pixel as determined by its proportion of length to width. Pixel shape differs between computer and video output. In computer or print media, pixels are square. In video and television media, pixels are slightly rectangular.

Pixelize Filter

Paint – A distortion filter that replaces groups of pixels in an image with the average color values of the pixels in each group.

Playlist

The side palette in TitleOne that displays the layouts in your current project. The playlist is available in all TitleOne modules.

See also Sequencer Playlist.

Pluge Test

Part of the SMPTE video test pattern, generally used when calibrating your output monitor and your frame buffer.

Plug-In Filters

See Third-Party Filters.

Port Object

CG – Displays layers of data created in associated RTX applications. Port objects can only be used if the RTX Ports option is enabled.

Posterize Filter

Paint – A color adjustment filter that reduces the number of colors in an image. You specify the number of tonal levels (brightness values) for an image, and the filter maps pixels to the level that most closely matches the original value.

Predefined Media

Media Store – Media files that you can display by clicking one of the programmable Defined Shot

Box buttons. They are often used for emergency or test situations because you can quickly access the media files.

Preserve Luminance

Paint – An option with the color balance filter that, when selected, automatically compensates for changes in luminance caused by increasing or decreasing color values.

Pressure Sensitivity

See Graphics Tablet.

Preview Board

A frame buffer dedicated to the preview channel.

Preview Button

Sequencer – A button on the Run tab that loads the current event to the preview channel.

Preview Channel

The video channel used to preview video before it goes live.

Preview Toolbar

Animation – A toolbar providing options for viewing your animation on your computer monitor without rendering. This toolbar also provides viewing time options.

See also Time Slider.

Program Board

A frame buffer dedicated to the Program Channel.

Program Channel

The video channel used to send video and events to air or tape.

Program/Preview Palette

A palette in TitleOne that allows you to preview and take single events. You can also use the palette to monitor your output.

During playback of a running playlist, the Preview palette displays an image of the next layout, and the Program palette displays an image of the current layout on the program channel.

Progressive Scan

A system of video scanning where a complete frame is drawn from left to right and top to bottom in one pass. This method reduces the flicker of the picture on the television or monitor and results in smoother motion on the screen.

Compare to Interlaced Scan.

PRV Button

The Program/Preview palette button that, when selected, sets automatic online updates for the Preview channel.

Push Pins

Animation – Buttons on the Time tab that, when depressed, force a path to remain on screen until the entire animation is complete.

Q

Quick Preview

A preview of a take made while TitleOne is offline.

Quick Take

A take made while TitleOne is offline.

R

Radial Blur Filter

Paint – A distortion filter that blurs an image around a center point.

RapidFire

Tool for quickly loading, updating, taking, and clearing layouts. The RapidFire Keyboard option provides a custom keyboard that has additional macro keys designed for fast, accurate layout updates in a live environment.

Raster Image

See Bitmap.

Red Channel

Paint – The channel that stores all of the red information in the image.

See also Channel.

Redraw

Updates the screen display. Complex layouts or images may take longer to redraw than simpler ones. You can force a redraw by pressing CTRL+D.

Reduce Flicker Filter

Paint – A video clean-up filter that blurs the image in the vertical direction. This reduces flicker caused by sharp changes in luminance between pixels in the vertical direction.

Referenced Media File

Media Store – A media file that is referenced, not included in a Media Store database. Media Store creates a pointer to the media file location. The location can be on disk, network volume, or compact disc. When you display the media file, Media Store will locate the file or prompt you to load the disk or compact disc.

Registry Manager

CG – A utility that helps organize registry (template) files. It can create new registries, manage existing registries, and copy templates between registries.

Registry - Motion Template

See Motion Template Registry.

Registry - News Edit

See News Edit Registry.

Registry - Templates

See Template Registry.

Relative Position

Animation – A template option that uses the current placement of the selected keyframe as the starting point for the motion template.

Remote Render

Sequencer – Renders the event to a remote location during output. Image display latency depends on network or CD-ROM access time and image size.

Remove Flicker Filter

Paint – A video clean-up filter that smooths the image in the vertical direction to remove flicker caused by sharp changes in color in the vertical direction.

Render

Converts information regarding objects or effects to a graphical bitmap form that can be displayed to video. Object information includes shape, color, bevels, and transparencies. Effect information includes keys, transitions, movement, and layering. When you render an event, a temporary file is written to the hard drive and then sent to the frame buffer when you do a take.

This process happens on the fly in offline mode. In online mode, all events are pre-rendered for immediate output when you do a take.

Render Animation

Animation – A command that saves an animation in a bitmap .via file for playback.

Render Location

Sequencer – The location where events are rendered when you go online. Render locations include local disk, or remote.

Rendered File Names

Sequencer – The file name of an event after it has been rendered. To take events to video, TitleOne needs to render the events to separate files.

Repeat Field Filters

CG, Paint, and Frame Grab – Video clean-up filters that duplicate the even- or odd-numbered scan lines in an image, replacing the odd- or even-numbered ones respectively. The image appears to shift either up or down depending on the filter.

Restoring Alpha

See Alpha Memory Tool.

Reveal

CG and Sequencer – A layout or transition that displays text one line or character at a time. In Sequencer, a reveal is recognized as an effect event.

RGB Color Model

A color model that describes colors in terms of the amount of red, green, and blue light in the signal. The values of the three components are added together to determine the final color. White is defined with red, green, and blue set to full intensity (255); black is defined with red, green, and blue set to zero intensity. Any color definition with equal amounts of red, green, and blue is gray.

Row

CG – Specially grouped text objects that are easily edited and duplicated using shortcut keys and the Row menu. Used for creating tables and leaderboards.

S

Safe Title Area

See Video Safe Title Area.

Saturation

The amount of pure color. 100% saturation is pure color, with no black or white mixed in. 0% saturation is a shade of gray, with no hint of color.

Scale

Animation – A tool on the Shape tab that increases or decreases the size of an object or character while constraining its proportions.

Paint – A tool on the Tools palette that increases or decreases the size of an object or selection without constraining its proportions.

Scan Line

A single horizontal sweep across the face of a video display by the electron beam that creates the picture. NTSC uses 525 scan lines; PAL uses 625.

Scanned Image

A printed image that has been converted by a scanning device into a graphics file for the purposes of electronic transmission or modification. A scanning device, or scanner, resolves the image into elements of color, light, and shade.

Scrapbook

A temporary holding place for layouts, frame grabs, styles, library items, and other TitleOne elements. Use the Scrapbook to transfer objects between TitleOne tools, or to transfer layout styles and elements between CG layouts.

Scrapbook items are not saved when you close TitleOne.

Scrubber

See Preview Toolbar.

SDTV (Standard Definition Television)

Digital television format that includes 480-line resolution in both interlaced (480i) and progressively scanned (480p) formats.

Seamless Texture

Paint – A small texture image that can be tiled endlessly without a visible edge. Some seamless textures may have features that make the repetition obvious, but no image edge is ever visible.

Search - Complex

See Complex Search.

Search Key

Media Store – A particular attribute of a media file to search for in a Media Store search. Search keys include keywords, resolution, title, media type, media number, date, and user name.

Search Results

Media Store – The list of media files that meet the search criteria in a Media Store search.

Search - Simple

See Simple Search.

Search String

See Additive Search String.

Selection

Paint – The area of an image that you wish to work on. The selected area is surrounded by a dotted line. Paint offers numerous Selection tools that allow you to select areas of the image.

Selection Channel

Paint – The Selection channel is only available when you have made a selection in Paint using the Selection tools, and shows you an 8-bit image of the selection.

Selection Contents

Paint – An export option that exports the contents of the current selection channel as a bitmap image.

Sequencer

TitleOne module that manages the playlist, assigns transitions, and applies output controls.

Sequencer Playlist

Sequencer – The main workspace in Sequencer that contains the events for the current project. You can arrange the event output order, view output details, and apply output controls.

Set Folio

Media Store – A temporary location for holding media files from the most recent Media Store database search.

Shadow Element

CG – A color or pattern offset from the face and edge elements by a specific number of pixels. Used to add depth to flat 2D objects. The shadow element always appears behind all other object elements.

Sharpen Filter

CG, Paint, and Frame Grab – An image filter that mildly sharpens the image with a 3x3 convolution filter.

Sheen Element

CG – A band of color that cuts through another element, like a focused highlight.

Shot Box Palette

Media Store and Sequencer – Selects an event in the playlist when operating in Play mode. You can assign the event to a Defined button for quick recall or output the selected item.

Simple Search

Media Store – A Media Store search that uses a single keyword to find and retrieve media files.

See also Complex Search.

Single Pixel Brush

Paint – A brush that adds color or alpha or edits an image information a single pixel at a time.

Smooth Processing

See Sub-Pixel Processing.

SMPTE

Society of Motion Picture and Television Engineers.

SMPTE Color Bars

A video test pattern, generally used when calibrating your output monitor and your frame buffer.

Snapshot

Animation – A rendered bitmap of an object at a particular point in time on a spline path.

Sort Key

Media Store – A particular media file attribute by which media files are sorted in the Media window. Sort keys include date, keywords, title, resolution, media number, and user name.

Sort Order

Media Store – The order in which media files are displayed in the Media window. By default, media

files are sorted by media number. The default sort order is set on the Folios tab of the Preferences dialog.

Source File

The data file where all image information is stored.

Spline

Animation – A curve whose shape is defined by a set of points along a path.

See also Path.

Spline Properties

Animation – The collection of attributes associated with a spline path, such as tension, continuity, and bias.

Stagger

Animation – Offsets the time values when applying a motion template containing more than one path. Stagger starts each path after a specific number of keyframes.

Strata

Configuration utility that controls the output and display of your Inscriber applications. You can assign applications to a layer on one or two channels. Events can be scheduled and played independently on separate layers.

Style

CG – A set of attributes that you can apply to the text and graphic objects.

See also Text Styles.

Surface

CG – Collects and organizes styles used in CG layouts. By building a list of commonly-used styles, new layouts can be created with a standardized look without needing to recreate the styles for every object.

Surface Texture

Paint – An imported image used to provide a more interesting pattern to an image. Surface textures generally have finer detail than other types of textures. Surface textures are used by all brush-based tools, and are applied using the Texture tool.

See also Texture.

System Folios

Media Store – Collection folios that are accessible to all network users.

Contrast with Local Folios.

T

Tab-Constrained Line

See Floating Text Line.

Tablet

See Graphics Tablet.

Tag

A feature that allows you to label text objects for easy updates. You can update the content with an external data source, or manually in a TitleOne dialog. Example dialogs that support tags are News Tag Editor (CG) and Overlay.

Take

Outputs a rendered image or event file.

Take Button

Sequencer – Outputs the current event without loading the next event to the preview channel.

Overlay – Applies any changes to the show/hide state. If you set an item to display, clicking Take displays the item on the program channel. If you set an item to hide, clicking Take hides the item on the program channel.

Take Down Button

Sequencer – Outputs the current event and loads the next event to the preview channel.

Template

CG – Pre-defined layouts which are stored in template registries. Creating layouts from templates ensures that the layouts use standardized colors, styles, and media.

Tension

Animation – A spline property that refers to the rigidity of the spline path. You can increase the tension to tighten the curve, or decrease the tension to add slack to the curve.

See also Spline.

Text Object

CG – An object containing one or more lines of text. Text objects can be constrained in various ways to keep their lengths constant.

Texture

CG – An effect that simulates a pattern or tactile surface on a CG object, such as marbling or basket-weave.

Paint – A graphic image pattern that can be applied to objects and images. Textures simulate a tactile or three-dimensional surface. Paint has three types of textures: seamless, paper, and alpha.

Texture Tool

Paint – A tool that paints a surface texture without changing the image chrominance values. Lightens or darkens the images based on the imported texture.

Third-Party Filters

Paint – Filters not packaged with TitleOne. Some third-party filters can be used in Paint, but they may only affect the opaque areas of the image, and not the alpha channel. You should test third-party filters in Paint to determine how they perform.

See also Filters and Photoshop Filters.

Three-Dimensional Space (3D)

Animation – Workspace that incorporates height, width, and depth. Objects created in the two dimensional CG workspace (height and width) are editable in 3D when brought into Animation.

Thumbnail

See Media File Thumbnail.

Timecode

Sequencer – An indexing method that uniquely identifies each frame of frame-based media.

Denotes hours, minutes, seconds, and frames elapsed for the medium (HH:MM:SS:FF).

Timecode Source

A device, usually a video playback device like a VCR, that generates time codes.

Timecode Trigger Type

Sequencer – A group trigger type. Uses an external time code source to trigger events. When the time code source reaches the event in point, the event is triggered.

Timeline

Animation – A horizontal bar on the Time tab that gives a visual representation of the length of a motion path, and which allows you to manipulate the amount of time an individual spline path takes to display. The time is measured in frames. There are as many track sliders as there are paths.

Time Slider

Animation – A slider on the Preview Toolbar that gives you a visual representation of where you are at any time in your animation. You can select any frame in the animation by dragging the time slider to the desired location. Keyframes in your animation are represented by tick marks along the bottom of the time slider.

Timed Trigger Type

Sequencer – A group trigger type. Plays each event sequentially for the set duration. Once Sequencer reaches the event in point, the event is triggered. The Timed trigger starts the clock at 00:00:00:00.

Tint Filter

Animation – A motion filter that allows you to adjust color values of an object over time. You can gradually change the saturation of an object from black and white to color, or change the hue from one color to another.

Title

The overall appearance of a video image created in CG, consisting of three main elements: background, text, and graphic objects. Known also as a layout.

Tolerance Fill

Paint – A tool that fills a layer or selection based on luminance values in the image. Use the Tolerance field to specify how close luminance values need to be in order to be filled in.

Total Event Duration

The sum of the event duration and event wait time.

Track Slider

See Timeline – Animation.

Transformation

Animation – Changes the appearance of all or a portion of an image using the Move, Scale, Skew, Freeform, and Rotate tools.

Transition

Sequencer and Media Store – Determines how still events appear on-screen. When you output the event, the event displays gradually using the selected transition. Transition types include: wipe, tile, organic, dissolve, and push.

See also Animation Transition.

Transition Direction

Sequencer and Media Store – The direction a new media file takes as it starts to appear on screen. Applies only to wipe, tile, and push transitions.

Transparency

CG and Paint – The amount of background information that you can see through a graphic object, text, or image. An object with 0% transparency is opaque; an object with 100% transparency is fully transparent.

Transparency Filter

Animation – A motion filter that changes the alpha value of an object over time, allowing you to fade an object in or out between keyframes.

Treatment

CG – Each object element is assigned a treatment. Treatments dictate the color, image, and Active Texture choices available to the elements they are assigned to.

Tri-Level Sync

An HDTV synchronization signal.

Trigger Type

Sequencer – Controls how you output your playlist once you go online. The trigger type applies to all the events in a group.

The five trigger types include: Manual, Timed, GPI, Time Code, and PC Clock.

Trim Points

See Mark In and Mark Out Points.

Twist

Animation – A tool on the Shape tab that adjusts the shape of an object by twisting it around either the *x*- or *y*-axis.

U-V

Upconvert

The process of converting a lower resolution image or input signal to a higher resolution. For example, a standard definition 480i signal is upconverted to a high definition 1080i signal.

Value

The shade of a color. Increasing or decreasing the value of a color is like adding or removing black pigment. Value must be 100% for a color to be fully saturated. When value is 0%, the color is completely black.

Vector-Based Image

See .eps file.

Vectorscope

A device used to adjust the color vectors when calibrating the frame buffer.

Vertical Blanking Interval (VBI)

The period of time when the video signal is at the blank level causing the electron beam not to appear when it sweeps back from the bottom to the top of the screen. A VBI occurs almost instantly.

Vertical Flip Filter

CG, Paint, and Frame Grab – An image filter that flips the image top to bottom. In Paint, the vertical flip filter is accessed through the Transform tab.

VGA (Video Graphics Array)

A computer video adapter which can display 16 colours at a resolution of 640x480 or 256 colours at 320x200.

via Format

See .via file.

ViaBuilder

TitleOne utility that creates an animation from a series of individual animation frames created with an external program. You can import .via animations into G-Scribe to use in your CG layouts as media objects or moving textures.

Video Aspect Ratio

The relationship between the width and height of an image when it is sent to video. The aspect ratio is different for computers and video monitors, so a correction is made when images are taken to video. The video aspect ratio is set in the Inscribe.ini file, and controlled by three values: the actual aspect ratio, the horizontal resolution, and the vertical resolution. The aspect ratio for NTSC and PAL is 4:3; the aspect ratio for HDTV is 16:9.

Video Bug

See Corner Logo.

Video Clean-up Filters

CG, Paint, and Frame Grab – Inscriber filters that smooth fielded images captured from video into non-interlaced images by removing odd- or even-numbered scan lines.

Video Frame

An interlaced image consisting of two separate fields (odd- and even-numbered scan lines), taken from a video signal.

See also Field and Interlaced Scan.

Video Legalize Filter

CG and Frame Grab – A legalize filter that performs a simple NTSC or PAL legalize (depending on the settings in the General tab of the Preferences dialog) to prevent out-of-range values.

See also Legalize Filters.

Video Safe Title Area

The area of the video screen where images are legible on a standard television screen. This generally includes the center 80% of the total screen area.

Video Standards

Standards that specify the protocol for television broadcast transmission and reception. Common standards include NTSC, PAL, and HDTV.

Video Transparent Pattern

The pattern TitleOne uses to represent video transparency, set on the General Preferences tab. This pattern is not included in your final rendered images.

VII Compression

Media Store – An image compression method especially suited to computer-generated images.

VII compression can give over 20:1 compression, and is the fastest method available in Media Store.

See also Compression.

VMAXX-10

A brand of frame buffer.

VMAXX-20

A brand of frame buffer.

VMAXX-30

A brand of frame buffer.

VRAM

Video RAM on a frame buffer or video card.

W-Z

White Point

A setting for the output monitor, set during calibration.

Widescreen

The term given to picture displays that have a wider aspect ratio than a standard television monitor. For example, the aspect ratio for a standard television is 4:3 and widescreen is 16:9.

See also Aspect Ratio.

Wildcard

Media Store – A variable used as search criterion to help you find a range of media files: "?" matches a single character; "*" matches one or more characters.

XD-200 Control Panel

Configures standard definition and high definition SDI inputs and outputs and reference source. The XD-200 Control Panel displays the status associated with different configurations and allows you to view a test pattern to ensure your configuration is working properly.

X-axis

See Axis (X, Y, or Z).

Y-axis

See Axis (X, Y, or Z).

Y/Cr/Cb

Y/Cr/Cb refers to a "component" type digital television connector or cable.

The separate components of the video signal (luminance - light; and chroma - color) are kept separated by using a 3-wire cable. One wire is "Y" for light or brightness, one wire is "Cr" for red, and one wire is "Cb" for blue.

Z-axis

See Axis (X, Y, or Z).

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Technical Support

If you require technical support, contact your dealer first. Since your dealer helped you configure your system, your dealer is also the best resource for your system configuration issues.

If your dealer is unable to resolve your technical support problems consult the BCD Customer Support Portal at https://support.broadcast.harris.com. The portal provides 24-hour access to technical support for any Harris hardware or software product, allowing you to:

- Access technical information from a vast Knowledge Base.
- Locate technical solutions and information quickly via the Advanced Search Engine.
- Enter service requests and track the progress of those requests online.
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- Download the latest software updates.
- Stay current on all the latest service and safety bulletins.

If you cannot find the information you need at the support portal, contact Inscriber Graphics Systems technical support:

Email: graphics.support@harris.com

Web: http://broadcast.harris.com/products/broadcastGraphics/

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